Title 13
ON-SITE SEWAGE*

* **Editor's Note**: R&R No. 99-01 changed the name of this title from "Sewage" to "On-Site Sewage."

Chapter 13.04
GENERAL PROVISIONS

13.04.010 Short title.

These rules and regulations shall be known as the "Board of Health On-site Sewage Regulations" and may be so cited, and are referred to herein as "this title."
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 1, 12-19-86)

13.04.020 Declaration of purpose and policy.

A. In compliance with Chapter 246-272 WAC, this title is enacted as an exercise of the Board of Health power of King County to protect and preserve the public health. Its provisions shall be liberally construed for the accomplishment of this purpose.

B. It is expressly the purpose of this title to provide for and promote the health of the general public, and not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of this title.

C. It is the specific intent of this title to place the obligation of complying with its requirements upon the owner and/or operator of premises and/or other persons designated by this title within its scope, and no provision of nor term used in this title is intended to impose any duty whatsoever upon King County or any of its officers or employees, for whom the implementation or enforcement of this title shall be discretionary and not mandatory.

D. Nothing contained in this title is intended to be nor shall be construed to create or form the basis for any liability on the part of King County, or its officers, employees or agents, for any injury or damage resulting from the failure of the owner and/or operator of any premises to comply with the provisions of this title, or by reason or in consequence of any act or omission in connection with the implementation or enforcement of this title on the part of King County by its officers, employees or agents.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 2, 12-19-86)

13.04.030 Scope.

The provisions of this title shall apply to the location, design, installation, alteration, addition, repair, relocation, replacement, maintenance, monitoring and use of all on-site sewage systems (OSS) except as specifically otherwise provided in this title.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 3, 12-19-86)

13.04.040 Applicability.

A. This title shall apply to all lots, parcels, and tracts not served by public sewers without regard to whether such lots, parcels or tracts may have been in existence prior to the effective date of this title.

B. The repair, addition to, or alteration of existing OSS shall be governed by this title.

C. The construction, installation, repair, addition or alteration of an OSS for which a valid application for an OSS permit was made under prior regulations shall be governed by the regulations existing at the time of the application; provided, that the permit conditions may be modified to include additional requirements of this title if the health officer determines that a threat to public health may otherwise result. However, this title shall apply if the permit was applied for more than two (2) years prior to the effective date of this title.

D. The Washington State Department of Ecology has authority and approval over:

1. Domestic or industrial wastewater under Chapter 173-240 WAC; and

2. Sewage systems using mechanical treatment, or lagoons, with ultimate design flows above 3,500 gallons per day.

E. The Washington State Department of Health has authority and approval over:

1. Systems with design flows through any common point between 3,500 to 14,500 gallons per day; and

2. Any large on-site sewage system ("LOSS") for which jurisdiction has been transferred to the Department of Health under conditions of a memorandum of agreement with the Department of Ecology.

F. The health officer has authority and approval at a minimum over:

1. Systems with design flows through any common point up to 3,500 gallons per day;

2. Any large on-site sewage system ("LOSS") for which jurisdiction has been transferred by contract to the health officer from the Department of Health.

G. Where this title conflicts with Chapter 90.48 RCW, *Water Pollution Control*, the requirements under those statutes apply.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 4, 12-19-86)

13.04.050 Connection to public sewer.

A. The owner or occupant of lands or premises located within the urban growth area (as defined in the King County Comprehensive Plan) undertaking new residential or non-residential construction, short subdivision or subdivision from which sewage will originate shall connect to a public sewer, provided the sewer utility permits such connection. Within unincorporated King County such connection shall be in accordance with King County Code Section 13.24.136. Within incorporated cities such connection shall be in accordance with the policies of that city or the local sewer utility. The connection shall be made by connecting the building drain with an approved side sewer, and the side sewer to the public sewer.

B. For existing development within the urban growth area which is within two hundred feet (200') of a public sewer, where an on-site system is operating, connection to the public sewer is required when the sewering authority permits such connection and when:

1. Repair, modification or replacement of the system is necessary, or the existing OSS has failed and an OSS fully conforming to this title cannot be designed and installed; or

2. At such time that additional construction which in any way affects the on-site sewage system is proposed.

C. The distances set forth in subsection (B) of this section shall be calculated along the shortest route in road rights-of-way and easements, consistent with the comprehensive planning and sewer extension practices of the sewer utility involved, from the existing sewer to the nearest point of the lands or premises to be served.

D. Every plumbing fixture and every sanitary drainage system not connected to a public sewer, or not required by law to be connected to a public sewer, shall be connected to an OSS.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 13 § 1, 12-19-86)

13.04.054 Abandonment.

A. Persons permanently removing a septic tank, seepage pit, cesspool, or other OSS wastewater tanks from service shall within thirty (30) days:

1. Have the septage removed by an approved pumper; and
2. Remove or destroy the lid; and
3. Fill the void with compacted soil; and
4. Report the abandonment to the health officer on a form obtained from the health officer.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.04.058 Introduction of non-sewage compounds and industrial wastewater prohibited.

Persons shall not introduce into an OSS:

A. Strong bases, strong acids or organic solvents for the purpose of system cleaning.

B. Any sewage system additive not specifically approved by the Washington State Department of Health.

C. Waste components atypical of residential sewage.

D. Industrial wastewater.

E. Hazardous materials.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.04.060 Surface discharge prohibited.

Sewage, including treated effluent from an OSS (or side sewer), including septic tank waste as per WAC 246-272-19501 (*Septage Management*), shall not be discharged to surface water or upon the surface of the ground.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 13 § 2, 12-19-86)

13.04.070 Domestic water supply source.

No on-site sewage system shall be constructed, maintained or used if the plumbing fixtures draining to the system are not supplied with water under pressure pursuant to King County Code Sections 13.24.138 or 13.24.140 and from an approved source. An approved water source consists of one (1) of the following:

A. Public Water Source: A public water source currently in compliance with Chapter 246-290 WAC or Chapter 246-291 WAC and Title 12 of this code.

B. Private Individual Well Source: A private well on a lot five (5) acres or greater in

size[1] or a lot created prior to May 18, 1972, which complies with all of the following conditions:

[1. For new lots created after February 2, 1995 lot area placed into a separate sensitive area protection tract in accordance with King County Code Section 21A.24.180 may be included in the computation of the minimum five (5) acre lot size required by this section.]

1. Source Location Approval: Any proposed new or replacement individual private well location shall be submitted to the health officer and receive approval prior to construction of the water source.

(a) All private water system development in the urban growth area or in the rural area as defined by the King County Comprehensive Plan is subject to the provisions of King County Code Sections 13.24.140 and 13.24.138, respectively.

(b) Proposed new initial water source locations shall be accurately specified upon an OSS site design application and shall be submitted for review by the health officer in conjunction with evaluation of the proposed OSS design.

(c) Application for replacement water source locations shall be made on forms obtained from the health officer and shall be accompanied by a review fee as specified in the fee table.

(d) Information shall be provided as part of the source location application to include at minimum:

A completely dimensioned plot plan, drawn to a scale not smaller than one inch (1") equals one hundred feet (100') accurately showing the location of the proposed water source relative to property boundary lines, existing and proposed OSS components including OSS reserve area, existing and proposed structures, roads and driveways, surface water, direction of surface drainage, a designated source protection sanitary control area and any other features relevant to the siting of a water source location.

(e) Within thirty (30) days of receiving a complete application the health officer shall approve or deny said application or notify the applicant that the application is approved, denied or pending. Reasons for denial or pendency of the application will be in writing.

(f) A well source site approval is valid for a period of two (2) years from the date of approval or until the expiration of a building permit issued by the building official for construction of the primary structure to be served by the new well, whichever period is longer.

2. Source Protection Covenant. The property owner shall establish a source protection sanitary control area by providing a recorded protective covenant prohibiting, within a horizontal distance of not less than one hundred feet (100') of the well, potential sources of contamination as described in Section 12.24.010 of this code and WAC 173-160-020 and 173-160-205.

3. Demonstrate adequate water quantity by either:

(a) Drilling the well and conducting a four (4) hour pump test which demonstrates that the proposed source well is capable of providing water to a residential dwelling in the amount of not less than 400 gallons per day. (Section 4, *Individual Water Supply Systems, Guidelines for Determining Water Availability for New Buildings,* April, 1993, Ecology Publications 93-27). This pump test may be required to be performed during the months of August, September or October at the health officer's discretion; or

(b) Providing adequate information to the satisfaction of the health officer to demonstrate the aquifer's capability to provide 400 gallons per day. This information may include well logs or pumping reports from neighboring wells utilizing the same aquifer.

4. Demonstrate adequate water quality by submitting results of all tests taken for the following and showing:

(a) At least one (1) bacteriological analysis from the source water which does not exceed the maximum contaminant level prescribed in WAC 246-291-320.

(b) At least one (1) chemical test for nitrate and arsenic from the source water described in table 1, WAC 246-291-330, which does not exceed the maximum contaminant level per WAC 246-291-330.

5. Provide a copy of well driller's report per requirements of WAC 173-160-050.

6. Construction of the well must meet Washington State Department of Ecology's construction standards as per requirements of Chapter 173-160 WAC.

C. A private spring on a lot five (5) acres1 or greater or a lot created prior to May 18, 1972 which complies with all of the following conditions prior to application for OSS site design approval:

1. Application for an individual private spring water source shall be made on forms provided by the health officer and shall be accompanied by a fee as specified in the fee table.

2. The application shall include: a recorded protective covenant of no less than two hundred feet (200') up slope and one hundred feet (100') down slope from the spring prohibiting any potential sources of contamination as described in Section 13.04.070(B)(2), a spring location plot plan, a detailed spring construction plan, and information demonstrating acceptable water quality and quantity as specified by Section 12.20.040 of this code, and Chapter 246-291 WAC.

3. Within thirty (30) days of receiving a complete application the health officer shall approve, deny or notify the applicant that the application is pending. Reasons for denial or pendency of the application shall be stated in writing.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 13 § 3, 12-19-86)

Chapter 13.08
DEFINITIONS

13.08.010 General.

Words and phrases in this title, unless otherwise clearly indicated by their context, shall have the meaning set out in this chapter.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.018 Abbreviations.

A. "ASTM" means American Society of Testing Materials.

B. "ATU" means Aerobic Treatment Unit.

C. "DDES" means King County Department of Development and Environmental Services.

D. "DOH" means Washington State Department of Health.

E. "LOSS" means large on-site sewage system.

F. "mg/l" means milligrams per liter.

G. "OSS" means on-site sewage system.

H. ">" means greater than.

I. "<" means less than.

J. "PPM" means parts per million.

K. "SAS" means soil absorption system.

L. "SSAS" means subsurface soil absorption system.

M. "OSM" means certified on-site system maintainer.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.020 Accessory living quarters.

"Accessory living quarters" means living quarters within an accessory building for the sole use of the family or persons employed on the premises or for the temporary use of guests of the occupants of the premises. Such quarters have no kitchen facilities and are not rented or otherwise used as a separate dwelling unit.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.024 Additive.

"Additive" means a commercial product added to an on-site sewage system intended to affect performance or aesthetics of the on-site sewage system.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.030 Alternative on-site methods.

"Alternative on-site methods" means units other than individual septic tanks and conventional gravity or conventional pressure distribution drainfields and include sand filters, composting toilets, mound systems, chemical toilets, vault privies, incinerator toilets, holding tanks, aerobic treatment units, gravelless and gravel substitute drainfields and other systems or devices approved for use by the Washington State Department of Health and pursuant to Chapter 13.52 of this title.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.034 Alternative system.

"Alternative system" means an on-site sewage system, or components thereof, other than a conventional gravity system or conventional pressure distribution system.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.040 Approved.

"Approved" means a written statement of acceptability, in terms of the requirements of this title, issued by the health officer and where required, by the Washington State Department of Health.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.046 Approved list.

"Approved list" means the "List of Approved Systems and Products," developed annually and maintained by the State Department of Health and containing the following:

A. List of proprietary devices and methods approved by the State Department of Health;

B. List of specific systems meeting treatment standard 1 and treatment standard 2;

C. List of experimental systems approved by the State Department of Health;

D. List of septic tanks, pump chambers, and holding tanks approved by the State Department of Health.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.048 Area of special concern.

"Area of special concern" means an area of definite boundaries delineated through public process, where the health officer, or the State Department of Health in consultation with the health officer, determines that additional requirements for on-site sewage systems may be necessary to reduce potential failures, or minimize negative impact of on-site systems upon public health.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.050 Associate installer.

"Associate installer" means a qualified person approved by the health officer to construct or repair on-site sewage systems and/or directly supervise work crews constructing or repairing on-site sewage systems and who must be under the general supervision of a certificated master installer.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.060 Building drain.

"Building drain" means that part of a building drainage system which receives the discharge from waste pipes inside the walls of the building and conveys it to the building sewer beginning two feet (2') outside the building walls.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.070 Building sewer.

"Building sewer" means the sewage piping system designed to conduct sewage from the building drain to a point of connection to an on-site sewage system.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.072 Cesspool.

"Cesspool" means a pit or receptacle which receives untreated sewage and allows the liquid to seep into the surrounding soil or rock.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.080 Community on-site system.

"Community on-site system" means any on-site sewage system utilizing subsurface disposal and which:

A. Serves two (2) or more single-family dwellings that are under separate ownership or that are located on separate lots; or

B. Serves two (2) or more commercial facilities that are under separate ownership or that are located on separate lots.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.082 Commercial system.

"Commercial system" means an on-site sewage system serving a development other than or in addition to a single-family residence.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.084 Conforming system.

"Conforming system" means any on-site sewage system, except an experimental system, meeting any of the following criteria:

A. Systems in full compliance with new construction requirements under this title; or

B. Systems approved, installed and operating in accordance with requirements of the previous edition of this title in force when the system was constructed; or

C. Systems or repairs permitted through the waiver process and which assure public health protection by higher treatment performance or other methods.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.085 Continuing Education Unit (CEU).

"Continuing education unit" (or "CEU") means eight (8) contact hours of participation annually in an organized educational experience, under responsible sponsorship, capable direction and qualified instruction acceptable to the health officer pertaining to on-site sewage treatment and disposal.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.086 Conventional gravity system.

"Conventional gravity system" means an on-site sewage system consisting of a septic tank and subsurface soil absorption system with gravity conveyance and distribution of the effluent and excluding any alternative system components.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.088 Conventional pressure distribution system.

"Conventional pressure distribution system" means an on-site sewage system consisting of a septic tank and subsurface soil absorption system with pressure distribution of the effluent and excluding any alternative system components.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.089 Covenant.

"Covenant" means an agreement filed with the King County records and elections division which shall run with the land, stating certain activities and/or practices are required or prohibited.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.090 Cover.

"Cover" means soil material that is used to cover a subsurface soil absorption system area.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.100 Cuts and/or banks.

A "cut" means any artificially formed slope whose cut face exposes a restrictive soil layer or any artificially formed slope greater than one-hundred percent (100%). A "bank" is any naturally occurring slope which, when measured vertically downward from a horizontal line through the crest, will produce a slope equal to or greater than one hundred percent (100%), and measured down to a point where the slope changes to not more than seventy percent (70%) for a horizontal distance of at least twenty feet (20'). A cut and a bank are illustrated in Figures 13.08-1A and 13.08-1B.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.110 Department.

"Department" means the Seattle-King County department of public health.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.112 Department of Health.

"Department of Health" means the Washington State Department of Health.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.113 Design control point.

"Design control point" means a designated point of reference selected or installed on a site by the designer from which measurements and elevations are taken to establish relative locations of on-site sewage system components and relate design document locations to actual site locations. May also be referred to as a benchmark.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.114 Designer.

"Designer" means a person approved by the health officer, or an engineer who matches site and soil characteristics with appropriate on-site sewage technology.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.116 Development.

"Development" means the creation of a residence, structure, facility, mobile home park, subdivision, planned unit development, site, area, or any activity resulting in the production of sewage.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.118 Disposal component.

"Disposal component" means a subsurface soil absorption system (SSAS) or other soil absorption system receiving septic tank or other pretreated effluent and transmitting it into original, undisturbed soil. (*See also* Section 13.08.130, Drainfield.)
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.120 Dosing systems.

"Dosing systems" means on-site sewage systems using a pump or siphon to transport,

control flow and/or delivery volume of effluent to the final treatment and disposal component.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.130 Drainfield.

"Drainfield" means a subsurface soil absorption system consisting of trenches, together with the piping and gravel, designed and installed in original undisturbed soil for the purpose of receiving septic tank or other pretreated effluent and transmitting it into the soil.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.132 Effluent.

"Effluent" means liquid discharged from a septic tank or other OSS component providing primary treatment. (*See also* Section 13.08.495, Typical residential effluent.)
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.134 Engineer.

"Engineer" means a person who is licensed and in good standing under Chapter 18.43 RCW as a civil, sanitary or agricultural engineer.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.140 Excessively permeable soils.

"Excessively permeable soils" means soils with a soil texture type 1A or other textures as defined by the United States Department of Agriculture standards and where conditions are such that the treatment potential is ineffective in retaining and/or removing substances of public health significance to underground sources of drinking water and soils with a percolation rate of one and one half (1.5) minutes per inch or slower.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.142 Expansion.

"Expansion" means a change in a residence, facility, site, or use that:

A. Causes an on-site sewage system to be loaded in excess of its existing treatment or disposal capability or be used beyond its anticipated useful life, such as but not necessarily limited to when a building's occupancy potential is increased, or an increase in number of bedrooms, and/or the life expectancy of a building is extended by being rebuilt, renovated or remodeled; or, there is a change in use, for example, from a residence to a commercial use or to a special use such as a daycare facility.

B. Reduces the treatment or disposal capability of an existing on-site sewage system or the reserve area, such as, but not necessarily limited to, when a building addition is placed over or directly downslope from OSS components including reserve area.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.150 Experimental system.

"Experimental system" means any alternative on-site system:

A. Without approved design guidelines developed by the State Department of Health; or

B. A proprietary device or method which has not yet been evaluated and approved by

the State Department of Health.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.152 Failure.

"Failure" means a condition of an on-site sewage system that threatens the public health by inadequately treating sewage or by creating a potential for direct or indirect human contact between sewage and the public. Examples of failure include:

A. Sewage on the surface of the ground;

B. Sewage backing up into a structure caused by slow soil absorption of septic tank effluent;

C. Sewage leaking from a septic tank, pump chamber, holding tank, conveyance or collection system;

D. Cesspools, seepage pits and pit privies;

E. Inadequately treated effluent contaminating ground water or surface water;

F. Failure to meet conditions stipulated on the permit.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.160 Fill.

"Fill" means soil materials that have been displaced from their original location or condition except for sand which is being used in the construction of a mound or sand filter.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.164 Five (5) acres.

"Five (5) acres" means 217,800 square feet or one one-hundred twenty-eighth (1/128th) of the section in which the property is located, including in addition, up to thirty (30) feet, but no more than one-half of the width of the right-of-way of any perimeter street.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.170 Food-service establishment.

"Food-service establishment" means any commercial establishment in which food is processed or otherwise prepared, packaged, or repackaged into another container for consumption or for resale.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.180 Greywater.

"Greywater" means sewage having the consistency and strength of residential domestic type wastewater. Greywater includes wastewater from sinks, showers, and laundry fixtures, but does not include toilet or urinal waters.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.190 Groundwater.

"Groundwater" means a subsurface water occupying the zone of saturated soil, permanently, seasonally, or as the result of the tides (the top surface of which is commonly referred to as the water table). Indications of groundwater may include:

A. Water seeping into or standing in an open excavation from the soil surrounding the excavation.

B. Spots or blotches of different color or shades of color interspersed with a dominant color in soil, commonly referred to as mottling. Mottling is a historic indication for the presence of groundwater and is the result of intermittent periods of saturation and drying, and may be indicative of poor aeration and impeded drainage. (*See also* Section 13.08.512, Water table.)
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.200 Health officer.

"Health officer" means the director of the Seattle-King County department of public health or his/her authorized representative.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.202 Holding tank sewage system.

"Holding tank sewage system" means an on-site sewage system which incorporates a watertight holding tank, the services of a sewage pumper/hauler, and the off-site treatment and disposal of the sewage generated.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.210 Impermeable.

"Impermeable" means a soil horizon having a percolation rate exceeding fifty-nine (59) minutes per inch.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.212 Industrial wastewater.

"Industrial wastewater" means the water or liquid-carried waste from an industrial process. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as animal boarding kennels, feedlots, poultry houses, or dairies. The term includes contaminated storm water and leachate from solid waste facilities.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.214 Installer.

"Installer" means a qualified person approved by the health officer to install or repair on-site sewage systems or components. (*See* Section 213.08.260, Master installer, and Section 13.08.050, Associate installer.)
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.218 Kitchen or kitchen facility.

"Kitchen" or "kitchen facility" means an area within a building intended for the preparation and storage of food and containing:

a. An appliance for the refrigeration of food;
b. An appliance for the cooking or heating of food; and
c. A sink.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.220 Large on-site system.

"Large on-site system" means any on-site system with design flows, at any common point, greater than three thousand five hundred (3,500) gallons per day.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.226 Limited repair.

"Limited repair" means the replacement, addition or alteration of a broken or malfunctioning building sewer pipe, sewage tank lid, sewage tank baffles, sewage tank pumps, pump control floats, pipes connecting multiple sewage tanks and drainfield inspection boxes and ports where the subsurface soil absorption system is not failing.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.240 Lot size.

"Lot size" means the lot area which is bounded by the property lines of that lot.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.250 Management.

"Management" means any person who forms and operates an on-site waste management system for the purposes of and under the provisions of Chapter 13.60 of this title, or the heirs, successors or assigns of such person.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.260 Master installer.

"Master installer" means a qualified person approved by the health officer to obtain on-site sewage system installation, modification and repair permits and is responsible for all construction done under those permits.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.262 May.

"May" means discretionary, permissible, or allowed.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.270 One (1) acre.

"One (1) acre" means property having an area size of forty-three thousand five hundred sixty (43,560) square feet.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.280 On-site sewage system (OSS).

"On-site sewage system" (or "OSS") means an integrated arrangement of components for premises not connected to a public sewer system which:

A. Conveys, stores, treats, and/or provides subsurface soil treatment and disposal of

residential sewage on the property where it originates; and

B. Includes piping, treatment devices, other accessories, and soil underlying the disposal component of the initial and reserve areas. May also be referred to as an on-site system or septic tank system.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.284 On-site system maintainer.

"On-site system maintainer" means a qualified person approved by the health officer to conduct performance monitoring inspections of, diagnose causes of malfunction and failure of and/or perform preventive maintenance on and make limited repairs to on-site sewage systems.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.290 Ordinary high-water mark.

"Ordinary high-water mark" means the mark on lakes, streams, and tidal waters, found by examining the beds and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland with respect to vegetation, as that condition exists on the effective date of this title, or as it may naturally change thereafter. The following definitions apply where the ordinary high water mark cannot be found:

A. The ordinary high-water mark adjoining marine water is the elevation at mean higher high tide; and

B. The ordinary high-water mark adjoining freshwater is the line of mean high water.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.300 Original permeable soil.

"Original permeable soil" means the naturally occurring soil of soil texture types 1 through 5 overlying any impermeable layer, any cemented layer overlying the groundwater table, or the elevation of groundwater during the wet season, with a percolation rate not greater than fifty-nine (59) minutes per inch.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.310 Percolation test.

"Percolation test" means a soil test performed at the depth of the bottom of a proposed subsurface soil absorption system to estimate the water absorption capability of the soil. The test is performed in accordance with the *Design Manual: On-Site Wastewater Treatment and Disposal Systems*, United States Environmental Protection Agency, EPA-625/1-80-012, October, 1980. The results are normally expressed as the rate in minutes at which one inch (1") of water is absorbed (minutes per inch).

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.320 Person.

"Person" means any individual, corporation, company, association, society, firm, partnership, joint stock company, or any governmental agency, or the authorized agents of any such entities.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.321 Pit privy.

"Pit privy" means a pit into which untreated sewage is directly deposited allowing the liquid to seep into the surrounding soil or rock.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.322 Pressure distribution.

"Pressure distribution" means a system of small diameter pipes equally distributing effluent throughout a trench or bed, as described in the *Guidelines for Pressure Distribution Systems* issued by DOH. (*See also* Section 13.08.088, Conventional pressure distribution system.)
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.324 Proprietary device or method.

"Proprietary device or method" means a device or method classified as an alternative system, or a component thereof, held under a patent, trademark or copyright.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.330 Public sewer system.

"Public sewer system" means a sewerage system:

A. Owned or operated by a city, town, municipal corporation, county, or other approved ownership; consisting of a collection system and necessary trunks, pumping facilities and a means of final treatment and disposal; and

B. Approved by or under permit from the department of ecology, the department of health and/or the local health officer.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.340 Pump lines.

"Pump lines" means the piping system designed to transport effluent by use of a pump or siphon to a sewage tank, a distribution or inspection box or to a pressurized effluent distribution network.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.341 Pump tank.

"Pump tank" means a watertight receptacle receiving the discharge of effluent from a septic tank and which contains a pump or siphon which doses the effluent into another OSS component. May also be called a dosing tank.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.342 Pumper.

"Pumper" means a qualified person approved by the health officer and holding a certificate(s) of competency pursuant to Chapter 13.68 of this title, to perform one or more of the following activities: May also be referred to as a "sludgehauler."

A. OSS pumper removes sewage and/or septage from sewage holding tanks, portable toilet units and OSS wastewater tanks and transports the contents to an approved disposal site.

B. Portable toilet pumper removes sewage from only portable/chemical toilet units and transports the contents to an approved disposal site.

C. Vessel (boat) sewage tank pumper removes sewage from holding tanks on vessels (boats) and transports the contents to an approved disposal site.

D. Grease trap/interceptor pumper removes animal and vegetable fats, oils and greases from grease traps and/or grease interceptor tanks and transports the contents to a recycling or approved disposal site.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.350 Repair.

"Repair" means the replacement, addition, or alternation of a sewage tank, distribution box, tight line, or other appurtenances of an existing OSS, and including any replacement, addition, or alteration to a soil absorption system.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.360 Reserve area.

"Reserve area" means an area of land approved for the installation of a conforming OSS and dedicated for replacement of the OSS upon its failure.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.370 Resident owner.

"Resident owner" means a person who designs, repairs, monitors and/or installs an OSS for a single-family dwelling which is owned and occupied by that person.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.372 Residential sewage.

"Residential sewage" means sewage having the consistency and strength typical of wastewater from domestic households.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.380 Restrictive layer.

"Restrictive layer" means a stratum impeding the vertical movement of water, air, and growth of plant roots. Examples of such layers or conditions are groundwater tables, hardpans, claypans, fragipans, compacted soil, bedrock, caliche and clayey soil.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.390 Seasonal water.

"Seasonal water" means any body of water not classified as surface water, which either flows or is contained in natural or artificial depressions for more than forty-eight (48) continuous hours. Also included in this definition are all wetland areas as defined in King County Code Chapter 21A.24 which are not classified as surface water.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.400 Secretary.

"Secretary" means the Secretary of the Washington State Department of Health or an authorized representative.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.402 Seepage pit.

"Seepage pit" means an excavation more than three feet (3') deep where the sidewall of the excavation is designed to dispose of effluent. Seepage pits may also be called "dry wells".
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.406 Septage.

"Septage" means the mixture of solid wastes, scum, sludge, and liquids pumped from septic tanks, pump chambers, holding tanks, and other OSS components.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.410 Septic tank.

"Septic tank" means a watertight pretreatment receptacle receiving the discharge of sewage from a building sewer or sewers, designed and constructed to permit separation of settleable and floating solids from the liquid, detention and anaerobic digestion of the organic matter, prior to discharge of the liquid.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.420 Sewage.

"Sewage" means any liquid or liquid-borne waste from the ordinary living processes, and includes any urine, feces, and the water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, or other places. For the purposes of these regulations, "sewage" is generally synonymous with domestic wastewater. (*See also* Section 13.08.372, Residential sewage.)
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.426 Sewage tanks.

"Sewage tanks" means prefabricated or cast-in-place septic tanks, pump tank/dosing chambers, holding tanks, grease interceptors, recirculating filter tanks and any other tanks as they relate to on-site wastewater systems, including tanks for use with proprietary devices. May also be referred to as "on-site wastewater system tanks."
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.430 Sewer utility.

"Sewer utility" means the owner and/or operator of a public sewer system.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.434 Shall.

"Shall" means must; the action referred to is mandatory.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.450 Side sewer.

"Side sewer" means the sewage piping system designed to conduct sewage from a building or other source of sewage located on any premises to a point of connection to a public sewer.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.460 Single-family dwelling.

"Single-family dwelling" means a detached building designed exclusively for occupancy of one (1) family.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.470 Soil log.

"Soil log" means an excavation in soil of sufficient size and depth made to adequately determine the soil's characteristics together with the detailed description of the soil's texture, structure, color, bulk density or compaction, water absorption capabilities or permeability, extent of disturbance and/or any other characteristics providing information as to the soil's capacity to act as an acceptable treatment and disposal medium for sewage.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.472 Soil type.

"Soil type" means a numerical classification of fine earth particles and coarse fragments as described in WAC 246-272-11001(2)(e).
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.480 Subdivision.

"Subdivision" means a division of land into lots, tracts, parcels, sites, or divisions described under Chapter 58.17 RCW, now or as hereafter amended, including both long and short subdivisions, planned unit developments, and mobile home parks.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.484 Subsurface soil absorption system (SSAS).

"Subsurface soil absorption system" (or "SSAS") means a system of trenches three feet (3') or less in width, or beds between three feet (3') and ten feet (10') in width, containing distribution pipe within a layer of clean gravel or other approved material designed and installed in original, undisturbed soil for the purpose of receiving effluent and transmitting it into the soil.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.490 Surface water.

"Surface water" means any body of water, whether fresh or marine, which either flows or is contained in natural or artificial depressions or drainage course and contains water for forty-eight (48) continuous hours during any of the months of May through October, or is

identified by King County department of natural resources as a significant drainage feature. Such bodies include, but are not limited to, natural and artificial lakes, ponds, rivers, streams, swamps, marshes, tidal water and wetlands.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.492 Treatment standard 1.

"Treatment standard 1" means a thirty (30) day average of less than 10 mg/l of biochemical oxygen demand (5 day BOD5), 10 mg/l of total suspended solids (TSS), and a thirty (30) day geometric mean of less than 200 fecal coliform per 100 milliliters.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.494 Treatment standard 2.

"Treatment standard 2" means a thirty-day average of less than 10 mg/l of biochemical oxygen demand (5 day BOD5), 10 mg/l of total suspended solids (TSS), and a thirty (30) day geometric mean of less than 800 fecal coliform per 100 milliliters.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.495 Typical residential effluent.

"Typical residential effluent" means effluent with a waste-strength range of 130 to 230 mg/l of biochemical oxygen demand (BOD); 49 to 150 mg/l of total suspended solids (TSS) and 10 to 25 mg/l of grease/oils (G&O).
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.496 Unit volume of sewage.

"Unit volume of sewage" means:

A. A single-family residence with not more than three (3) bedrooms;

B. A mobile home site in a mobile home park; or

C. 450 gallons of sewage per day where the proposed development is not single-family residences or a mobile home park.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.500 Vertical separation.

"Vertical separation" means the depth of unsaturated original, undisturbed soil of soil types 1B - 5 that exists between the bottom of a soil absorption component and a restrictive layer or highest seasonal water table or soil type 1A, as illustrated in Figure 13.08-2.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.510 Waived.

"Waived" means waived in writing by the health officer, and where required, by the secretary.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 1 § 5 (part), 12-19-86)

13.08.512 Water table.

"Water table" means the upper surface of the groundwater, whether permanent or seasonal. (*See also* Section 13.08.190, Groundwater.)
(R&R No. 99-01 § 2 (part), 3-19-99)

13.08.516 Watertight.

"Watertight" means assembled or constructed prohibiting the entrance or escape of liquids except through inlets, outlets, intercompartmental wall fittings or baffles.
(R&R No. 99-01 § 2 (part), 3-19-99)

Chapter 13.12
SEWAGE REVIEW COMMITTEE

13.12.010 Membership--Appointment--Term.

There is hereby established the King County sewage review committee (the "committee"). It shall consist of three (3) members with knowledge and experience in on-site sewage treatment and disposal and public health: a designated representative of the health officer and two (2) appointed members who are registered sanitarians or sanitary, agricultural or civil engineers. The two (2) appointed members of the committee shall be appointed by the director of the Seattle-King County department of public health or his or her duly authorized representative (the director). One (1) or more sanitarians or sanitary, agricultural and/or civil engineers shall be appointed by the director to serve as alternate members in the absence of any member, or when in the judgment of the committee a conflict of interest exists. Unless otherwise specified by the health officer, the terms of the two (2) appointed members and the alternate member(s) shall be for a term of three (3) years ending December thirty-first of the third year of such term, subject to reappointment. The registered sanitarian or engineer members may be selected from industry.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 10 § 1(A), 12-19-86)

13.12.020 Membership--Officers.

The committee shall select one (1) member to serve as its chair for each calendar year, and the chair may be re-elected. The chair may designate any person to serve as secretary to the committee. The committee shall adopt its own rules of procedure. Appointed members shall serve without compensation.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 10 § 1(B), 12-19-86)

13.12.030 Public meetings--Procedure.

A. Meetings shall be held on the call of the health officer, and shall be held with sufficient frequency that no more than forty (40) days shall elapse from the time an appeal for reconsideration is commenced until a recommendation is returned to the health officer by the committee, except that if a continuance is granted at the request of an appellant the committee shall return its recommendation within a reasonable time. The filing of any technical report or other exhibit subsequent to the commencement of an appeal shall be deemed a request for a continuance.

B. The committee may make recommendations to the health officer concerning the

health officer's decision or determination that is the subject of the appeal for reconsideration acting in an advisory capacity only.

C. Notice of all meetings of the committee shall be given not less than three (3) days prior thereto to any appellant and to any other person which had previously made known a desire to affect the disposition of the order or decision of the health officer which is the subject of the appeal for reconsideration.

D. All meetings of the committee shall be open to the public. Verbal testimony may be given to the committee during the meeting.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 10 § 2, 12-19-86)

13.12.040 Appeal for reconsideration--Commencement.

Any person aggrieved by any decision or order of the health officer made pursuant to this title concerning an OSS-related application pertaining to land in which that person has an interest, may appeal to the health officer for reconsideration of such decision or order. The appeal shall be commenced by the filing of a written application in the manner specified in this title, and shall be accompanied by a fee as set forth in the fee schedule. Upon receiving an appeal for reconsideration, the health officer may call for one or more meetings of the committee to review and make recommendations concerning the appeal.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 97-06 § 1, 12-19-97: R&R No. 98 § 1, 12-14-93: R&R No. 77 § 1, 12-11-91: R&R No. 3 Part 10 § 3(A), 12-19-86)

13.12.050 Appeal for reconsideration--Filing.

The appeal for reconsideration shall be in writing, submitted on one or more forms prescribed by the health officer, and shall be filed with the health officer not later than 5:00 p.m. of the sixtieth (60th) calendar day following the date of the decision or order that is the subject of the appeal. The appeal shall cite with particularity the decision or order appealed from, and shall contain a statement of the reason for the appeal and what relief is sought. The appeal shall be accompanied by any technical reports or other exhibits, prepared at the appellant's own expense, which the appellant wishes the committee and the health officer to consider.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 10 § 3(B), 12-19-86)

13.12.060 Appeal for reconsideration--Notice to neighboring property owners.

The appellant shall be responsible for providing, at his or her own expense, notice regarding the nature of the appeal to all owners of property within three hundred (300) feet of the property that is the subject of the appeal or to the nearest fifteen property owners, whichever is greater. Such notification shall be made on forms provided by the health officer.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 10 § 3(C), 12-19-86)

13.12.070 Appeal for reconsideration--Recommendation of committee--Decision.

Not later than sixty (60) days after an appeal for reconsideration is filed, the health officer shall issue to the appellant and to the committee his or her written decision on such appeal, except that if a continuance is granted at the request of an appellant the health officer shall issue his or her decision within a reasonable time. The health officer may affirm or reverse, wholly or in part,

or may modify any order or decision that is the subject of an appeal for reconsideration. In determining whether to grant or deny a variance or other relief sought by the appellant, the health officer may adopt or reject wholly or in part the recommendation of the committee. The reasons for the health officer's decision and any findings of fact made in support thereof must appear in the notice of the decision.
(R&R No. 99-01 § 2 (part), 3-19-99)

13.12.080 Appeal for reconsideration--Grant of variance.

The health officer may grant variances from the requirements of this title where there are unusual circumstances or conditions such that the application of the requirements would cause undue and unnecessary hardship. No variance shall be granted which would in any way tend to jeopardize the public health and safety and welfare or in any way tend to interfere with or prejudice the rights of others to the comfortable enjoyment of life and property. No variance shall be granted which would authorize installation contrary to the laws of the state of Washington, including Chapter 246-272 WAC as now or hereafter amended.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 10 § 3(D), 12-19-86)

13.12.090 Appeal for reconsideration--Variance expiration.

Any variance granted by the health officer shall unless otherwise specified by the health officer, expire after two (2) years from the date such variance is issued, unless the on-site sewage system is installed and approved prior to the expiration date.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 10 § (3)(E), 12-19-86)

13.12.100 Appeal for reconsideration--Judicial review.

A decision of the health officer issued pursuant to this title in response to an appeal for reconsideration shall be final unless an aggrieved person files a land use petition pursuant to Chapter 36.70C RCW for the purpose of judicial review of the decision.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 10 § 3(G), 12-19-86)

Chapter 13.16
TECHNICAL ADVISORY COMMITTEE

13.16.010 Membership.

There is established an on-site wastewater treatment and disposal stakeholders technical advisory committee, the members of which shall be the health officer, ex officio, and sixteen (16) appointive members: one of each of the following except where otherwise indicated:

A. Sanitary, agricultural or civil engineer licensed by the state of Washington.

B. On-site sewage system designer.

C. King County department of natural resources representative, ex officio.

D. Washington State Department of Health representative, ex officio.

E. United States Department of Agriculture, Natural Resources Conservation Service representative, ex officio.

F. Washington State Department of Ecology representative, ex officio.

G. Seattle Master Builders Association representative.

H. Seattle-King County Board of Realtors representative.

I. A representative of a nonprofit, nonpartisan public affairs or environmental affairs organization.

J. On-site sewage system maintainer.

K. Two (2) consumers representing the King County Unincorporated Area Councils.

L. Representative of incorporated cities.

M. Representative of a sewer utility district.

N. On-site sewage system installer.

O. On-site sewage system pumper.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 12 § 1, 12-19-86)

13.16.020 Appointment.

Members of the stakeholders technical advisory committee, other than ex-officio members, shall be appointed by the director of the Seattle-King County department of public health or his or her duly authorized representative. Appointments shall be for a term of three (3) years ending December thirty-first of the third year of such term, subject to reappointment. Any vacancy shall be filled for the unexpired term in the same manner as original appointments. Members shall serve without compensation.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 12 § 2, 12-19-86)

13.16.030 Procedure.

A. The stakeholders technical advisory committee shall organize and elect a chair and secretary who shall serve at the pleasure of the members. Such committee may adopt rules of procedure for its own governance and shall meet at the call of the chair subject to three (3) days written notice to each member of the time and place of such meeting.

B. The stakeholders technical advisory committee shall examine on-site sewage regulations adopted by the King County board of health, make recommendations thereon and shall review and recommend new methods and techniques of on-site sewage treatment and disposal, but shall act in advisory capacity only.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 12 § 3, 12-19-86)

Chapter 13.20
PERMITS AND CERTIFICATES

13.20.010 Permits--General.

A. Unless otherwise specified in this title, it is unlawful to construct, install, repair or modify an OSS without an OSS construction permit. Such permit shall be posted on the building or premises where the work permitted is being done, before the work is begun, and unless revoked, shall not be removed until such work has been finally approved by the health officer.

B. Except for a limited repair, the application submitted for an OSS construction permit shall be accompanied by an approved site design application. The permit application for a new OSS to serve a building shall be accompanied by evidence that the responsible building official has

issued a building permit authorizing construction of that building.

C. The fee for an OSS construction permit shall be as set forth in the fee schedule.

D. OSS construction permits shall expire two (2) years from date of issue.

E. Unless otherwise provided in this title, the applicant for an OSS construction permit shall be a certified master installer and shall be responsible for all work done under that permit.

F. The applicant for an OSS permit may not also be the designer named on the site application unless the work to be done consists solely of OSS failure repair.

G. Application for an OSS construction permit shall be made in writing in a manner prescribed by the health officer and shall be accompanied by a fee as set forth in the fee schedule. The health officer may deny the application or revoke the permit if in the health officer's judgment operation of the system will result in a public health hazard. The health officer may consider any relevant health and safety factors in making such a determination. If an application is denied on the grounds of a hazard to public health, the health officer at the time of the denial shall inform the applicant in writing of the reasons for the denial and the applicant's right to appeal the denial.

H. The authority to issue permits shall not be delegated by the health officer.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 98 § 2, 12-14-93: R&R No. 77 § 2, 12-11-91: R&R No. 49 § 1 (part), 12-1-89: R&R No. 3 Part 2 § 1, 12-19-86)

13.20.020 Designer certification.

A. Persons designing OSS must possess a valid on-site sewage system designer's certificate of competency, or be licensed and in good standing under Chapter 18.43 RCW as a sanitary, civil or agricultural engineer, except as provided in Section 13.20.040.

B. Application for an OSS designer's certificate of competency shall be made to the health officer and be accompanied by a fee as set forth in the fee schedule and evidence of successful completion within the previous twelve (12) months of a health officer-recognized course of instruction which includes soils and site evaluation, OSS design, OSS operation and basics of OSS monitoring and maintenance. The health officer will examine the applicant, and may deny the application if in the health officer's judgment the applicant is for any reason, including previous finding of negligence, incompetence, misrepresentation or failure to comply with this title, not qualified to design on-site sewage systems.

C. The fee for an OSS designer's certificate of competency is as specified in the fee table.

D. As a condition of maintaining certification the designer shall consistently demonstrate reasonable care, skill, accuracy and completeness in disclosing site conditions while performing work governed by this title and shall comply with all the terms and conditions of these and all other applicable rules and regulations.

E. The health officer may suspend or revoke any OSS designer's certificate of competency, pursuant to Chapter 1.08 of this code.

F. The certificate of competency shall expire December thirty-first of each year. The designer may not submit designs after December thirty-first unless the certification has been renewed. The holders of such a certificate may renew the certificate at any time prior to February fourth of the year following expiration without taking the examination specified by this section provided that:

1. A renewal application accompanied by a fee as specified in the fee table is submitted to the health officer. A late fee of twenty-five percent (25%) of the renewal amount will be charged by the health officer for renewal applications received after January fifteenth.

2. The applicant submits evidence that at least one (1) CEU credit has been earned

by the applicant during the previous calendar year.

G. The health officer may hold, as necessary, informational/educational meetings for all holders of a designer's certificate of competency. A minimum of four (4) weeks' notice of the meeting time and location shall be sent to each designer. Except as provided by the health officer, attendance at the meetings shall be mandatory for all designers. Failure to attend the required meetings, without prior approval of the health officer, shall be cause for the health officer to withhold recertification until an examination administered under the provisions of subsection (B) of this section is retaken. A designer who is also a certified installer will not be required to attend both designers and installers meetings providing the content of both meetings is in the judgment of the health officer essentially the same.

H. Designers shall be accessible to their clients, the installers, and the department during normal working hours. This is to be accomplished by either maintaining office personnel, a phone answering service, a phone answering device, or any other method acceptable to the health officer.

I. Certified designers shall notify the health officer in writing of the name of the designer who will complete their work as needed during absences of more than three (3) working days such as, for example, during each vacation and illness.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 98 § 3, 12-14-93: R&R No. 3 Part 2 § 2(A), 12-19-86)

13.20.030 Installer certification.

A. Except as provided in Sections 13.20.035 and 13.20.040, it is unlawful to install, modify or repair OSS without a currently valid installer's certificate of competency.

B. Application for Installer Certification.

1. Application for a master installer's or associate installer's certificate of competency shall be made to the health officer and shall be accompanied by a fee as set forth in the fee schedule.

2. The application shall be accompanied by evidence of successful completion within the previous twelve (12) months of a health officer-recognized course of instruction in the basics of OSS and installation of OSS.

3. The health officer shall examine the applicant, shall charge an exam fee as set forth in the fee schedule and may deny the application if in the health officer's judgment the applicant is for any reason, including previous finding of negligence, incompetence, misrepresentation or failure to comply with this title, not qualified to install on-site sewage systems.

C. Provisions for Certification.

1. As a condition of certification the master installer applicant shall submit evidence of and maintain at all times compliance with state of Washington minimum performance bonding requirements as stated in Chapter 18.27 RCW.

2. The health officer may suspend or revoke any master or associate installer's certificate of competency, pursuant to Chapter 1.08 of this code.

3. The installer's certificate of competency shall expire December thirty-first of each year. The installer may not obtain installation permits or construct or repair any OSS after December thirty-first unless the certification has been renewed. The holder of such a certificate may renew the certificate at any time prior to February forth of the year following expiration without taking the examination specified by this section provided that:

a. A renewal application accompanied by a fee as specified in the fee table is submitted to the health officer. A late fee of twenty five percent (25%) of the renewal amount will be charged by the health officer for renewal applications received after January fifteenth.

b. The applicant provides evidence that at least one (1) CEU credit has been earned by the master installer applicant and the associate installer applicant during the previous calendar year.

4. The health officer may hold, as necessary, informational/educational meetings for all holders of installer's certificates of competency. A minimum of four (4) weeks notice of the meeting time and location shall be sent to each installer. Except as provided by the health officer attendance at the meetings shall be mandatory for all installers. Failure to attend the required meetings, without prior approval of the health officer, shall be cause for the health officer to withhold recertification until an examination administered under the provisions of subsection (B) is retaken. An installer who is also a certified designer may not be required to attend both meetings providing the content of both meetings is, in the judgment of the health officer essentially the same.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 98 § 4, 12-14-93: R&R No. 3 Part 2 § 2(B), 12-19-86)

13.20.035 Maintainer certification.

A. On-Site System Maintainer (OSM) Certification. Unless otherwise specified in this title, including Sections 13.20.040 and 13.60.010 relating to homeowners, it is unlawful to conduct performance monitoring inspections of and/or perform preventive maintenance service, to include making limited repairs to on-site sewage systems, without a currently valid OSM certificate of competency.

B. Application for OSM Certification.

1. Application for an OSM certificate of competency shall be made to the health officer and shall be accompanied by a fee as set forth in the fee schedule.

2. The application shall be accompanied by evidence of two (2) years of relevant OSS experience.

3. The application shall be accompanied by evidence of successful completion within the previous twelve (12) months of a health officer-recognized course of instruction in the operation, monitoring and maintenance of on-site sewage systems.

4. The health officer shall examine the applicant except that the health officer may waive the examination for the designer who is performing monitoring of only these systems designed by that person. The health officer may deny the application if in the health officer's judgment the applicant is for any reason, including previous findings of negligence, incompetence, misrepresentation or failure to comply with this title, not qualified to monitor and maintain on-site sewage systems.

C. Provisions for Certification.

1. As a condition of certification the maintainer shall:

a. Submit evidence of and maintain at all times compliance with State of Washington minimum performance bonding requirements as stated in Chapter 18.27 RCW.

b. Consistently demonstrate reasonable care and skill in performing work governed by this title and shall comply with all the terms and conditions of these and all other applicable rules and regulations.

2. The health officer may suspend or revoke any OSM certificate of competency,

pursuant to Chapter 1.08 of this code.

3. The OSM certificate of competency shall expire December thirty-first of each year. The holder of such certificate may renew the certificate any time prior to February forth of the year following expiration without taking the examination specified by this section provided that:

a. A renewal application accompanied by a fee as specified in the fee table is submitted to the health officer. A late fee of twenty-five percent (25%) of the renewal amount will be charged by the health officer for renewal applications received after January fifteenth.

b. The applicant submits evidence of bonding as specified by Section 13.20.035(C)(1).

c. The applicant submits evidence that at least one (1) CEU credit has been earned by the OSM applicant during the previous calendar year.

d. The on-site system maintainer may not conduct performance monitoring inspections or perform preventive maintenance of on-site sewage systems after December 31st, unless the certification has been renewed.

4. The health officer may hold informational/educa-tional meetings for all holders of OSM certificates of competency. A minimum of four (4) weeks notice of the meeting time and location shall be sent to each maintainer. Unless otherwise specified by the health officer, attendance at the meeting shall be mandatory for all maintainers. Failure to attend the required meetings, without prior approval of the health officer, shall be cause for the health officer to withhold recertification until an OSM examination is successfully completed.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.20.040 Resident owner design, construction and monitoring.

A. A resident owner may personally design a system for his/her own single-family residence, provided that the site application submitted by the homeowner demonstrates that:

1. The area where the drainfield and reserve area are to be located has a minimum of four feet (4') of original permeable soil, and a minimum vertical separation of three feet (3') is maintained.

2. Not more than one (1) system is designed in any twelve (12) month period.

3. A conventional gravity soil absorption system is proposed.

B. A resident owner may personally construct, install, or repair a conventional gravity system for his/her own single-family dwelling, provided that:

1. The area where the drainfield and reserve area are located has a minimum of four feet (4') of original permeable soil and a minimum vertical separation of three feet (3') is maintained.

2. The resident owner constructs and installs not more than one system in any twelve (12) month period.

3. The requirement for soil depths as required in this subsection (B) and subsection (A) above may be waived by the health officer when the resident owner is making repairs or additions to an existing gravity system or repairing or replacing the building sewer component of an alternative system.

C. A resident owner of a single-family residence may monitor the performance of and perform prescribed preventive maintenance services for a conventional gravity OSS and for the septic tank component of an alternative OSS or, upon approval from the health officer, for a conventional pressure distribution system.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 2 § 3, 12-19-86)

13.20.050 Construction of on-site sewage systems.

A. Except as provided in Sections 13.20.035, 13.20.040 and 13.68.010, only a currently certified installer shall construct, repair or modify an OSS, pursuant to Section 13.20.030.

B. The master installer shall ensure that and certify to the health officer that either he/she or a certified associate installer was physically present during the entire installation of any OSS that was installed or repaired under a permit issued to the master installer.

C. For systems installed by the resident owner, that person shall certify in writing that he/she was present at all times and personally constructed, installed or repaired the OSS.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 2 § 4, 12-19-86)

Chapter 13.24
SUBDIVISION EVALUATION

13.24.010 Application.

A. Application for subdivision or short subdivision approval shall be made to the health officer on forms provided for this purpose, shall be accompanied by a fee as set forth in the fee schedule and shall be in sufficient detail to allow evaluation of the suitability of the proposed means of on-site sewage treatment and disposal. If a community on-site system is proposed, the preliminary report and plans and specifications shall be in accordance with Section 13.28.040 of this title.

B. Department review is not required for those subdivisions within the urban growth area where group A public water and public sewer service will be used for all of the resultant lots.

C. The application for any development, including but not limited to subdivisions, short subdivisions, mobile home parks, multi-family housing, and commercial establishments, shall include evidence that suitable site and soil conditions as required by this title, to adequately treat and dispose of sewage on-site are present. After review of the proposed development, the health officer shall either approve, deny, or hold the proposal pending submittal of additional information.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 97-06 § 2, 12-19-97: R&R No. 98 § 5, 12-14-93: R&R No. 77 § 3, 12-11-91: R&R No. 3 Part 3 § 1, 12-19-86)

13.24.020 Determination of minimum lot size.

A. The minimum lot size when creating new lots utilizing OSS shall be established by the health officer on the basis of the information submitted and any on-site inspections by the health officer.

1. All lots created must be at least twelve thousand five hundred (12,500) square feet and shall not exceed a maximum flow density of one-thousand five-hundred seventy (1,570) gallons of sewage per acre per day.

2. Lots utilizing an individual private water source shall be at least five (5) acres.

B. Factors that may be considered when determining type of on-site system, connection to sewers, or establishing minimum lot size area include but are not limited to the following:

1. Availability of public sewers, as determined by the King County Comprehensive Plan;
2. Soil type and depth;
3. Area drainage, lot drainage;
4. Protection of surface and ground water;
5. Setbacks from property lines, water supplies, etc.;
6. Source of domestic water;
7. Topography, geology and ground cover;
8. Climatic conditions;
9. Activity or land use, present and anticipated;
10. Growth patterns;
11. Individual and accumulated gross effects on water quality;
12. Availability of a one hundred percent (100%) reserve area for system replacement;
13. Anticipated sewage volume -- as determined by number of lots and development;
14. Effect on other properties;
15. Compliance with zoning and other requirements.

C. The minimum lot size requirement for creating subdivisions involving single-family residences or mobile home parks shall be determined by the soil type as outlined in Table 13.24-1.

Table 13.24-1
Minimum Land Area Requirement for Single-Family Residence or Unit Volume of Sewage by Soil Type

	-------Soil Type (defined by Table 13.28-3 of this title)------				
	1A, 1B*	2A, 2B	3	4	5*
Minimum Lot Size	1/2 acre	12,500 sq. ft.	15,000 sq. ft.	18,000 sq. ft.	20,000 sq. ft.

* For soil type 1A and type 5 an OSS providing at least treatment standard 2 shall be required.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 3 § 2, 12-19-86)

13.24.030 Evaluation process.

The department's review of development proposals shall consist of a two-stage review process: (1) The applicant must obtain the health officer's pre-application review prior to submittal of the development proposal to the King County DDES. (2) The applicant must obtain the health officer's final approval prior to final recording of the development proposal.

The applicant must provide the following information:

A. Preapplication Review.

1. A minimum of two (2) soil logs per proposed lot shall be provided prior to department preliminary review. Such soil logs shall be excavated in accordance with the requirements of Section 13.28.050. The soil log(s) must clearly show that within the lot area designated for the OSS the vertical separation specified in Table 13.28-1, and minimum lot sizes specified in Table 13.24-1 are provided.
2. A plot plan of the proposed subdivision depicting the land area proposed for an

initial on-site system and a contiguous one hundred percent (100%) system reserve area and soil log locations. The plot plan shall also identify any wells, surface water bodies and other features relevant to the siting of an on-site sewage system.

B. Final Review.

1. A minimum of four (4) soil logs per proposed lot shall be provided. Such soil logs shall be excavated in accordance with the requirements of Section 13.28.050. Each soil log shall clearly show that the vertical separation specified in Table 13.28-1 is provided.

2. A plot plan identifying sufficient area for a drainfield and a contiguous one hundred percent (100%) reserve area for each lot shall be submitted after road cuts have been made, any plat development site grading affecting the OSS area completed, and drainage plan completed. Such a plot plan shall also include any soil log locations, road cuts, wells, surface water features, utility easements, storm and surface water retention and disposal facilities and other features relevant to the design and installation of an OSS.

3. The applicant shall submit site designs for those proposed lots where the health officer determines that it is unclear that there is sufficient area for an on-site system and one hundred percent (100%) reserve area.

4. If existing homes are on any of the proposed lots then the applicant must demonstrate all of the following:

A. The existing OSS is in substantial conformance with this title;

B. There is adequate reserve area available for repair or replacement of the system in accordance with this title;

C. The continued operation of the system does not pose a threat to public health or groundwater quality.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 3 § 3, 12-19-86)

13.24.040 Rezones and boundary line adjustments.

The general procedures and fees for review of subdivisions outlined in Sections 13.24.010, 13.24.020 and 13.24.030 shall apply to rezones, boundary line adjustments, and other land use changes where department review is requested by the building or planning official.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 3 § 4, 12-19-86)

Chapter 13.28
DESIGN

13.28.010 Application submittal.

A. Application for site design approval for a proposed new OSS installation, repair or replacement of an existing failed soil absorption system, or modification, connection to or expansion of an OSS shall be made on forms provided by the health officer and be accompanied by (1) a plan review fee as set forth in the fee schedule and (2) a plan that demonstrates that the standards required in this title are met.

B. Approval of plans shall expire two (2) years from date of approval unless a valid building permit is issued by the building official for construction of the building for which the OSS has been designed. Upon expiration of plan approval or building permit the applicant shall submit a complete new application for review and approval by the health officer.

C. After review of a site design application, the health officer may deny the application if in the health officer's judgment the physical features of the property on which it is proposed to locate the OSS, or the design of the proposed OSS, are not adequate for effective operation of such system.

D. The health officer may revoke or withdraw a previously issued site design application approval upon determining that:

1. Development and use of the OSS as designed may threaten public health.

2. Omission, misrepresentation or concealment of material fact occurred in information submitted to the health officer.

E. Each site application denial or withdrawal of a previously issued approval shall be in writing citing the reason(s) and shall include a notice of the applicant's right to appeal for reconsideration pursuant to this title.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 98 § 6, 12-14-93: R&R No. 77 § 4, 12-11-91: R&R No. 49 § 2, 12-1-89: R&R No. 3 Part 3 § 4 § 1, 12-19-86)

13.28.020 Design support materials.

Design of OSS shall be in accordance with this title and shall accommodate all sewage from the buildings and premises to be served. The type of system required shall be determined by a soil and site evaluation conducted by the designer, which shall include location, soil type, vertical separation and other relevant conditions.

A. The application shall include the following:

1. A completed site design application form for the individual OSS that includes the following information;

a. Approximate address of property;

b. Parcel number and legal description of property;

c. Type and size of building the system will support;

d. Name and address of property owner, applicant and system designer;

e. Size of the parcel;

f. Whether the property is within the urban area or rural area as designated by the King County Comprehensive Plan; and, if located within the urban area, the distance of the nearest property line to the closest public sewer line;

g. Designation of an approved domestic water supply source;

h. Type of development for which site design application is being made, for example: single-family, multi-family or commercial; and type of permit, for example: new installation, or repair, or limited repair of an existing OSS;

i. The presence of sensitive area(s);

j. Date of testing;

k. Signature and certificate of competency number of designer or professional engineer's registration number; and

l. All other information requested on the site application for on-site sewage disposal system form.

2. Results of a soil and site evaluation conducted by the designer. The designer shall:

a. Provide soil logs that accurately describe subsurface soil conditions present within the primary and reserve soil absorption areas;

b. Use soil and site evaluation procedures and terminology in accordance with

Chapter 3 and Appendix A of the *Design Manual: On-Site Wastewater Treatment and Disposal Systems,* United States Environmental Protection Agency, EPA-625/1-80-012, October, 1980 or as amended, except where modified by, or in conflict, with this title;

c. Use the soil names and particle size limits of the United States Department of Agriculture Soil Conservation Service classification system;

d. Determine texture, structure, compaction and other soil characteristics that affect the treatment and water movement potential of the soil by using normal field and/or laboratory procedures such as particle size analysis;

e. Classify the soil as in Table 13.28-3, Soil Textural Classification;

f. Describe ground water conditions, including the date(s) of the observation(s), and the probable maximum water table height;

g. Describe existence of structurally deficient soils, such as slide zones and dunes, or those soils subject to major wind or water erosion events;

h. Describe the existence and location of sensitive areas, for example designated flood plains; and

i. Describe the location of any encumbrances affecting system placement, such as:

(1) Wells, other water sources and water supply lines;
(2) Surface water;
(3) Abandoned wells;
(4) Outcrops of bedrock and restrictive layers;
(5) Buildings;
(6) Property lines and lines of easements;
(7) Drainage structures such as footing drains, curtain drains, and drainage ditches;
(8) Cuts, banks, and fills;
(9) Driveways and parking areas;
(10) Existing OSS; and
(11) Underground utilities.

3. A completely dimensioned parcel plot plan, drawn to a one inch (1") equals twenty feet (20') scale, or the largest scale which will allow the parcel plot plan to be presented on a single eight and one-half inch by eleven inch page, accurately showing:

a. Site drainage characteristics including direction of surface drainage;

b. An arrow indicating north;

c. Topographical contours at two foot (2') intervals over the OSS area and all other areas containing features relevant to the design and installation of an adequate and efficient OSS;

d. Maximum building footprints, wastewater tanks and primary and reserve soil absorption system locations;

e. Location of all soil logs;

f. Potable water sources near property lines (drilled wells within one hundred feet (100') and all other sources within two hundred feet (200'));

g. Location of property and easement lines;

h. Location and description of design control point(s);2 and

i. The boundaries of the SAS detail drawing.

4. Construction plans and specifications showing:

a. Plumbing stub elevation; and

b. Vertical section detail drawings depicting dimensions of wastewater tank details to include minimum and maximum elevation of installation, maximum depth of cover over tanks, acceptable seasonal groundwater table elevation at all tank locations, depth of required bedding material, minimum and maximum drainfield width and depth, vertical separation and amount of cover material and placement if any, and any other OSS components to be constructed at the site.

5. A SSAS detail drawing scaled one inch (1") equals twenty feet (20') depicting design control point(s), the dimensions and location of all components of the proposed primary and reserve systems including trench widths, lengths and horizontal separations. If the location of the reserve area is at an elevation above the outlet of the septic tank, the design shall include all tanks, dosing chambers and piping necessary to allow distribution of the effluent to the reserve area with a minimum of disruption to the original subsurface field and other property of the owner. The health officer may require the installation of the dosing chamber, pressure lines and distribution box/inspection box where the future access to the reserve area will be severely limited.

6. Construction details for and location of any proposed footing drains, curtain drains, and interceptor drains.

7. Calculations and observations supporting the proposed design, including:
   a. Soil type; and
   b. Hydraulic loading rate in the soil absorption component.

8. An accurate vicinity location sketch and route map to the property.

9. Proof of availability of an approved domestic water supply source.

10. Such other information as the health officer may require; provided however if a design is rejected by the health officer due solely to this subsection (10), an additional design review fee shall not be required.

B. Additional requirements for an application for an OSS serving buildings other than or in addition to single-family residences:

1. Information to establish that the sewage is not industrial wastewater.

2. Information to establish that the sewage effluent applied to the infiltrative surface does not exceed typical residential effluent characteristics.

3. For all commercial developments not classified as community systems, recorded covenants stipulating that the property will remain under one (1) ownership.

4. Proof of a system operation monitoring and maintenance plan in accordance with requirements of Chapter 13.60.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 4 § 2, 12-19-86)

13.28.030 General design requirements.

A. Collection systems will be designed to comply with criteria set forth in *Criteria for Sewage Works Design*, Washington State Department of Ecology, October 1985 as thereafter amended.

B. Maximum Slopes.

1. OSS shall not be allowed on slopes exceeding forty percent (40%).

2. On slopes exceeding thirty percent (30%), the SSAS shall be pressure distribution and a maximum SSAS trench width of two feet (2').

C. SAS reserve area(s) shall be designated equal to at least one hundred percent (100%) of the primary SAS area. One or more areas may be designated as SAS reserve areas. If more

than two areas are designated then the reserve system shall be installed along with the primary SAS. At least two (2) soil log excavations shall be installed in each designated reserve area. Construction plans for the SAS reserve area may be required by the health officer.

D. OSS for lots created after July 1, 1984 shall be located on the same lot as the buildings they are designed to serve. Any existing OSS which is failing and for which there is insufficient area on the lot to repair the system may be replaced by an OSS located off-site provided proof of easements is submitted to the health officer. Approval shall be subject to such additional conditions as deemed necessary by the health officer to protect public health.

E. OSS shall not be located on landforms that are unstable. Such unstable areas may include those areas identified as Class III landslide hazards in the King County Sensitive Area folio or identified as such under King County Code Chapter 21A.24. Final determination of area stability is made by the responsible building official during the building permit review process.

F. Where any type of drain is to be installed for the purpose of intercepting subsurface water and channeling, concentrating, focusing or directing its flow onto a downstream property not under the ownership or agency of the applicant or King County, a release of damages holding King County and its employees harmless for any subsequent erosion or loss or limitation of use of such property must be executed and filed with the King County records and elections division and which shall run with the land, prior to approval of any site application.

G. All types of drains installed for the purpose of affecting vertical separation shall be verified as effective during the winter water table season as outlined in Section 13.28.060(C).

H. No downspout or footing drain shall be directly or indirectly connected to an OSS and the OSS shall be so constructed and installed that surface water or groundwater will not interfere with the operation of said system.

I. Seepage pits shall not be used for the disposal of septic tank effluent.

J. The installation and use of cesspools and pit privies for disposal of sewage is not permitted.

K. When grease traps are used, the design and installation will comply with criteria set forth in the *Uniform Plumbing Code*, 1997 Edition, International Association of Plumbing and Mechanical Officials, as amended. In addition the design application shall include a grease trap maintenance schedule.

L. When siphon systems are used, they shall comply with *Design Manual, Onsite Wastewater Treatment and Disposal Systems*, United States Environmental Protection Agency, EPA-625/1-8-012, October, 1980, as amended.

M. The connection of an accessory living quarters as defined in this title to a system designed for or in use by a single-family residence or commercial structure may be permitted provided that public health and groundwater quality are not affected, and the system is designed for the anticipated increased flow. In medical hardship cases as described in King County Code Section 21A.32.170, the health officer may allow the temporary connection of a mobile home to an existing OSS designed only for a single-family residence provided that neither public health nor groundwater quality are negatively affected.

N. Pump lines shall be installed at a depth which precludes disruption or damage by installation of other utilities or freezing.

O. No part of an OSS shall be constructed in the zero rise floodway of a flood hazard area as described by King County Code Title 21A. New OSS to serve new subdivisions shall be located outside the limits of a flood hazard area. The installation of new OSS within the flood fringe area of the one-hundred-year flood plain, as determined by DDES or the local building official, may be allowed if the applicant demonstrates that:

1. The proposed building parcel is an existing legal building site;
2. No feasible alternative site outside the flood hazard area is available;
3. Wastewater tanks and electrical components will be flood-proofed to the flood protection elevation;
4. A conforming subsurface soil absorption system can be installed; and
5. DDES or the local building official permits the development which is proposed to be served by the OSS.

P. No part of a SSAS including the filter material shall be located in fill.

Q. SSAS shall be constructed with observation ports terminating within utility boxes adjustable to final grade over the ends of the drainfield pipes, or other methods of drainfield detection approved by the health officer to aid in the future locating of these components.

R. All OSS constructed in excessively permeable soils shall meet or exceed treatment standard 2. This requirement will also apply to lots with a soil texture type 1A.

S. OSS shall not be permitted where a minimum vertical separation of three feet (3') of permeable soil below the infiltrative surface cannot be maintained except as provided in Table 13.28-1. The health officer may require greater vertical separation as needed to protect public health when the aquifer is used for a potable water supply.

Table 13.28-1
Minimum Treatment Standard and Effluent Distribution Method Required by Various Soil Types, Vertical Separation and Original Soil Depth Conditions

	Vertical Separation and (Soil Depth)			
Soil Type	< 1 Foot	> 1 Foot to < 2 Feet and (18") [1, 2]	>> 2 Foot to< 3 Feet and (30") [1]	>> 3 Feet (48") [1]
1A	Not allowed	Treatment standard No. 2 with Pressure Distribution	Treatment standard No. 2 with Pressure Distribution	Treatment standard No. Pressure Distribution
2A	Not allowed	Treatment standard No. 2 with Pressure Distribution	Conventional Pressure Distribution	Conventional Pressure Distribution
1B-4	Not allowed	Treatment standard No. 2 with Pressure Distribution	Conventional Pressure Distribution	Conventional Gravity Distribution

		Gravity Distribution		
5	Not allowed	Treatment standard No. 2 with Gravity Distribution	Treatment standard No. 2 with Gravity Distribution	Treatment standard No. 2 with Gravity Distribution

Table 13.28-1 Explanatory Notes

1. Except as provided in footnote 2, the number in parenthesis is minimum required original, undisturbed, permeable soil depth.

2. For existing lots of record where the original undisturbed soil depth above a restrictive layer is between 12 and 18 inches the following is required:

a. Minimum lot size is 5 acres. Any lot area placed into a separate sensitive area protection tract in accordance with King County Code Section 21A.24.180 may also be included in the computation of the minimum five (5) acre lot size required by this section.

b. The owner shall file a covenant with the King County records and elections division agreeing not to subdivide the parcel utilizing the OSS to less than 5 acres until public sewer service is provided.

c. A water table study shall be conducted during a time of high seasonal water table to establish available soil depth.

d. A mound preceded by an intermittent sandfilter or equivalent treatment and disposal methods specified in Chapter 13.52 and the approved list shall be used.

T. All OSS must comply with the standards contained in Table 13.28-2.

Table 13.28-2
Minimum Horizontal Separations

	----------MEASURE FROM----------		
Items Requiring Setback	**Edge of disposal component trench or reserve area**	**Septic tank, holding tank, containment vessel, pump chamber, and distribution box**	**Building sewer, collection, and non-perforated distribution line [1]**
Potable Water Source [2]			
- Private well	100 ft.	100 ft.	100 ft.
- Public drinking water well	100 ft.	100 ft.	100 ft.
- Drinking water spring/dug well [3]	200 ft.	200 ft.	200 ft.

Pressurized water supply line [4]	10 ft.	10 ft.	10 ft.
Properly decommissioned well [5]	10 ft.	10 ft.	N/A
Surface water [2, 6, 7]	100 ft.	50 ft.	10 ft.
Seasonal water [2, 7]	30 ft.	15 ft.	
Building foundation:			
A. Down-gradient	A. 15 ft. + height of foundation cut. Need not exceed 30 ft. [8, 9]	5 ft.	2 ft.
B. Up-gradient	B. 10 ft.		
Property or easement line	10 ft. [10, 11]	5 ft.	N/A
Decks with post and pier supports	5 ft.	5 ft.	
Septic tanks, pump tanks, sandfilter containment vessels:			
A. Down-gradient	A. 15 ft. + height of excavation. Need not exceed 30 ft. [9]		
B. Up-gradient	B. 5 ft.		
Interceptor/curtain drains/footing drains.			
- Down-gradient [8]	30 ft.	5 ft.	N/A
- Up-gradient [8]	10 ft.	N/A	N/A
Down-gradient cuts or banks 5 ft. or less in vertical height	15 ft. + height of bank [9, 13]		
Down-gradient cuts or banks greater than 5 ft. in vertical height with at least	15 ft. + height of bank but shall not be less than 25 ft. [9, 12]	N/A	N/A

5 ft. of original, undisturbed soil above a restrictive layer due to a structural or textural change	
Down-gradient cuts or banks greater than 5 ft. in vertical height with less than 5 ft. of original, undisturbed soil above a restrictive layer due to a structural or textural change	15 ft. + height of bank but shall not be less than 50 ft. [12]

Table 13.28-2
Explanatory Notes

1. "Building sewer" as defined by the most current edition of the Uniform Plumbing Code. "Non-perforated distribution" also includes pressure sewer transport lines.

2. With excessively permeable soils or other sites where conditions indicate a greater potential for ground or surface water contamination or pollution, the distance from any water supply or surface water may be increased by the health officer.

3. Setbacks from private springs and from shallow wells without intact casings or those wells which are not constructed in accordance with Chapter 173-160 WAC and are utilized as a source of drinking water shall comply with Section 13.04.070(C).

4. The health officer may approve a sewer transport line crossing a water supply line if the sewer line is constructed in accordance with Section 2.4 of the Department of Ecology's *Criteria for Sewage Works Design*, revised October, 1985 or equivalent.

5. Before any component may be placed within 100 feet of a well, the designer shall submit a "decommissioned water well report" completed by a licensed well driller, which verifies that appropriate decommissioning procedures noted in Chapter 173-160 WAC were followed.

6. Setback measured from ordinary high water mark of surface water. Greater setback may be required to prevent pollution. The health officer will state reasons for greater setback to applicant in writing.

7. This separation may not be reduced by culverting of streams without written approval for the culverting from King County, but in no case shall this separation be less than fifteen feet (15') plus the height of the excavation which contains the culvert. Need not exceed thirty feet (30').

8. The item is down-gradient when liquid will flow toward it upon encountering a water table or a restrictive layer. The item is up-gradient when liquid will flow away from it upon encountering a water table or restrictive layer.

9. May be reduced to ten feet (10') by the health officer when bottom of infiltrative surface is downgradient from the base of the foundation cut or wastewater tank excavation, or there is at least five feet (5') of original undisturbed unsaturated soil above a restrictive layer formed due to a structural or textural change.

10. May be reduced five feet (5') by the health officer in repairs to existing systems, in setbacks to easements or where a confirmed property line is upgradient from the soil absorption component.

11. This distance may be increased to thirty feet (30') by the health officer where cuts or

construction on neighboring properties may affect the system.

12. Need not exceed one hundred feet (100').

13. May be reduced to ten feet (10') when the bottom of the infiltrative surface is below the base of the cut or bank and no restrictive layer or layer formed due to a structural or textural change is intersected or there is at least five feet (5') of original, undisturbed soil above a restrictive layer or layer due to a structural change.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 4 § 3, 12-19-86)

13.28.040 Community and large on-site systems (LOSS).

A. Design. Design of these systems shall meet or exceed the requirements specified in WAC 246-272-08001 and as hereafter specified by this section.

B. Prior to construction, plans and specifications for LOSS shall be submitted for approval to the health officer in accordance with WAC 246-272-08001(12).

1. Requirements for Certification. All preliminary reports and plans and specifications for new community systems, extensions or alterations shall be prepared by a sewage system designer certified as provided in Section 13.20.020 or by an engineer as defined by this title. Any project exceeding 3,500 gallons per day shall be designed by an engineer. Within sixty (60) days following the completion of and prior to the use of any LOSS or community system project or portion thereof a certification shall be made to the department and signed by the system designer or engineer that he/she has inspected the physical facilities of the project, and the designed physical facilities are constructed in accordance with this title and with the plans and specifications approved by the health officer.

2. The fee for review of a new system preliminary report, plans and specifications and an engineering report for repair or replacement of an existing system shall be as specified in the fee schedule.

3. Management and maintenance of community and large on-site systems shall comply with Section 13.60.020 of this title.

C. After approval of the preliminary report and design plans and specifications by the health officer, an OSS installation permit shall be obtained prior to installing the large on-site system or community system. In addition, an OSS installation permit shall be obtained for each residence prior to installation of any septic tank, pump tank (if needed) and connecting line to the community system.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 4 § 4, 12-19-86)

13.28.050 Soil test procedures.

A. Soil Logs. Results of all soil logs shall be submitted as part of the application for design approval. Soil log excavations shall:

1. Allow examination of the soil profile in its original position by excavating pits of sufficient dimensions, but not less than two feet (2') in diameter, to enable observation of soil characteristics by visual and tactile means. The pits shall be constructed to a depth three feet (3') deeper than the bottom of the proposed infiltrative surface, but shall be no deeper than the depth of the water table or restrictive layer.

2. For single-family structures, soil logs shall include four (4) or more test holes located in representative parts of the proposed primary and reserve soil absorption areas and shall be separated by at least twenty feet (20'). At least two (2) shall be located in the primary SAS area and two (2) in each area designated for the reserve SAS area.

3. For non-single-family development, soil logs shall be made from one (1) or more test holes for each one thousand five hundred (1,500) square feet total primary and reserve SAS areas, but not less than four (4) soil logs shall be provided. At least two (2) soil log excavations shall be in the primary and two (2) in each area designated for the reserve SAS area.

4. Be marked with a suitable flag or label with an indelible identifying number or letter and designer's name. Corresponding numbers or letters shall appear on the design plan.

5. Allow determination of the soil's texture, structure, color, bulk density or compaction, water absorption capabilities or permeability, and elevation of the highest seasonal water table.

6. Use the soil names and particle size limits of the United States Department of Agriculture Soil Conservation Service classification system.

7. Classify the soil as in Table 13.28-3, Soil Textural Classification, describing soil type, depth of each type and any evidence of seasonal water table. Soil particle size analysis and/or percolation tests may be required by the health officer where identification of soil absorption characteristics is in question.

Table 13.28-3
Soil Textural Classification

Soil Type	Soil Textural Classifications
1A	Very gravelly [1] coarse sands or coarser. **All extremely gravelly [2] soils.**
1B	Very gravelly medium sand, very gravelly fine sand, very gravelly very fine sand, very gravelly loamy sands.
2A	Coarse sands (also includes ASTM C-33 sand).
2B	Medium sands.
3	Fine sands, loamy coarse sands, loamy medium sands.
4	Very fine sands, loamy fine sands, loamy very fine sands, sandy loams, loams.
5	Silt loams that are porous and have well developed structure.
Unsuitable for disposal	Other silt loams, sandy clay loams, clay loams, silty clay loams, sandy clay, clay, silty clay, and strongly cemented or firm soils.

Table 13.28-3

Explanatory Notes

1. Very Gravelly = >35% and <60% gravel and coarse fragments, by volume.
2. Extremely Gravelly = >60% gravel and coarse fragments, by volume.

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8. The owner of the property shall be responsible for constructing and maintaining the soil log excavations in a manner to minimize potential for physical injury by:

(a) Placing excavated soil no closer than 2 feet from the excavation;

(b) Providing a ladder, earth ramp or steps to a depth of four feet (4'), for safe egress, then completing the excavation to gain the additional two-foot depth necessary to observe the six feet of soil face; however, these deepest two feet are not to be entered *(Requirements (a) and (b) of this subsection are illustrated by Figure 13.28-1)*;

(c) Providing adequate physical safeguards such as covers, flagging or fencing over and/or around the excavation's perimeter so as to prevent injury or damage to the general public or creation of a hazard to livestock; and

(d) Filling the excavation with compacted soil upon completion of the soil log evaluation.

B. Percolation Tests. When percolation tests are conducted, the tests shall be consistent with the procedure outlined in the *Design Manual: On-site Wastewater Treatment and Disposal Systems*, United States Environmental Protection Agency, EPA-625/1-80-012, October, 1980 as amended, except where modified by, or in conflict with, this title. Test holes shall be maintained and protected by the owner so as to prevent injury or damage to the general public or the creation of a hazard to livestock and the owner shall fill the test holes with compacted soil upon completion of evaluation.

C. Particle Size Analysis. When particle size analysis tests are conducted, the procedure used shall be consistent with American Society for Testing Materials Standard D-442.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 4 § 5, 12-19-86)

13.28.060 Soil conditions.

A. All OSS shall have a minimum vertical separation as outlined in Table 13.28-1 of this code. A minimum of eighteen inches (18") of original permeable soil is required above any seasonal high water table or impervious layer of soil on all sites to be considered for OSS except that less than eighteen inches (18") but not less than twelve inches (12") may be allowed by the health officer provided the lot size is not less than five (5) acres, and a sandfilter to mound OSS or equivalent approved treatment and disposal is installed, and the owner files a covenant with the King County records and elections division agreeing not to subdivide the parcel until public sewer service is provided.

B. Where marginal soil conditions exist, the health officer may require that additional investigation be conducted.

C. Where there is evidence of high winter water table or shallow restrictive layer, the health officer may require that additional testing or monitoring be conducted to verify water table levels. The applicant's plan for conducting such testing shall be specified in a water table monitoring plan which shall be submitted no later than January first, to allow adequate time to monitor and evaluate the seasonal water table. If not a part of a full site design application submission the plan shall be accompanied by a fee as specified in the fee table. The health officer shall render a decision on the acceptability of the results of the seasonal high water table testing or monitoring within twelve (12) months of receiving the application, contingent upon presence of

precipitation conditions typical for the region.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 4 § 6, 12-19-86)

13.28.070 Required absorption area.

A. Single-family Dwellings. For design purposes one hundred fifty (150) gallons/bedroom/day shall be utilized in determining unit volume with a minimum of three (3) bedrooms. For each additional bedroom OSS designs must use at least an additional one hundred twenty (120) gallons/bedroom/day. Loading rates shall be determined according to soil texture type as outlined in Table 13.28-4.

Table 13.28-4
Maximum Hydraulic Loading Rate For Residential Sewage [1]

Soil Type	Soil Textural Classification Description	Loading Rate gal./sq. ft./day
1A	Very gravelly [2] coarse sands or coarser, extremely gravelly [3] soils	1.2 [4]
1B	Very gravelly medium sands, very gravelly fine sands, very gravelly very fine sands, very gravelly loamy sands	Varies according to soil type of the non-gravel portion [5]
2A	Coarse sands	1.2
2B	Medium sands	1.0
3	Fine sands, loamy coarse sands, loamy medium sands	0.8
4	Very fine sands, loamy fine sands, loamy very fine sands, sandy loams, loams	0.6 6
5	Silt loams that are porous and have well developed structure	0.45 6, 7

Table 13.28-4
Explanatory Notes

1. Compacted soils, cemented soils, and/or poor soil structure may require a reduction of the loading rate or render the soil unsuitable for OSS.
2. Very Gravelly = >35% and <60% gravel and coarse fragments, by volume.
3. Extremely Gravelly = >60% gravel and coarse fragments, by volume.
4. Due to the highly permeable nature of type 1A soil, only alternative systems which meet or exceed treatment standard 2 may be installed.
5. The loading rate listed for the soil type present in the non-gravel portion is to be used for calculating the minimum absorption area required. The value is to be determined from this table.
6. OSS installed in soil texture type 4 and type 5 shall be constructed during dry weather and dry soil conditions to minimize compaction and smearing during excavation.

7. SSAS in soil type 5 must utilize pressure distribution.

B. Buildings Other than Single-family Residences.

1. The owner shall file a covenant agreeing that the property will remain under one (1) ownership for all commercial developments not classified as community systems.

2. Required absorption area must be determined by using one of the following methods:

a. By using the figures given in Table 13.28-5, then using the appropriate application rate from Table 13.28-4; or

b. By determining average water meter readings for one (1) year from at least three (3) similar establishments and adding a minimum safety factor of fifty percent (50%).

3. The minimum SAS area must be two hundred (200) square feet.

Table 13.28-5

Type of Establishment [1]	Gallons Per Person Per Day
Multiple Family Dwelling (per person - 2 per bedroom - Minimum of 2 bedrooms per unit)	75
Factories, office buildings, etc. (add 100 gallons/day for each utility sink per shift; food service not included)	20
Food Service Establishments - with food preparation	50 (gallons per seat)
Taverns - no food preparation (estimate patrons per day and add 15 gallons/employee)	5
Mobile Home Parks (figure minimum 3 bedrooms, 2 people per bedroom)	75
Resort Camps	50
Work or Construction Camps	50
Day Camps (no meals served)	15
Swimming Pools and Bathhouse (sanitary facilities only)	15
Country Clubs (per member present, add 15 gallons/day per employee)	130

Motels with kitchen (figure 2 persons per bed space)	50
Motels (figure 2 persons per bed space)	40
Drive-in Theaters (per car space)	10
Theaters (per auditorium seat)	5
Airports (per passenger)	5
Retail Stores (per toilet room for customer use)	650
Retail Stores (per employee per shift - add 100 gallons/day for each utility sink)	15
Service Stations (per vehicle served)	15
Churches without kitchen (seating capacity)	5
Churches with kitchen (seating capacity)	15
Recreational Vehicle Parks (without sewer and water hookups - with central toilets and showers - per space)	50
Recreational Vehicle Parks (with sewer and water hookups - with central toilets and showers - per space)	100
Boarding Houses	50
Campgrounds (with central comfort station - with flush toilets and showers - per space)	50
Campground (with central comfort station - without showers - per space)	25
Picnic Parks (flush toilets only - per person)	5
Picnic Parks (with flush toilets - bathhouse and showers - per person)	10
For uses not listed in this table, the upper *range values in Design Manual: On-Site wastewater Treatment and Disposal*	*Design Standards for Large On-site Sewage Systems*,

Systems, United States Environmental Protection Agency, EPA-625/1-80-012, October, 1980 shall be used. If the type of facility is not listed in the EPA design manual, design flows from one of the following shall be used:

(A) 1993, Washington State Department of Health (available upon request to the department); or

(B)

1. For buildings other than single-family residences the requirements of Section 13.28.020(B) shall be met.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 4 § 7, 12-19-86)

Chapter 13.32
BUILDING SEWERS

13.32.010 General.

Construction, materials, distance separations and other specifications shall be as set out in this chapter.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 1(A), 12-19-86)

13.32.020 Pipe specifications.

Pipe for constructing the building sewer shall be a minimum of four inches (4") inside diameter and be cast-iron or plastic composition which complies with the current King County Plumbing Code. Polyvinyl chloride pipe shall comply with American Society of Testing Materials (ASTM) specification D-3034 as a minimum.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 1(A)(1), 12-19-86)

13.32.030 Joints and grading.

Construction of the building sewer line shall be such as to secure watertight joints and it shall be on a grade of not less than one eighth inch (1/8") per foot.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 1(A)(2), 12-19-86)

13.32.040 Pipe bends.

No straight T's or ninety degree (90°) ells shall be permitted in the building sewer line and all forty-five degree (45°) or more acute bends shall have accessible cleanouts. Sanitary T's shall be acceptable.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 1(A)(3), 12-19-86)

13.32.050 Cleanouts.

Building sewers of four-inch (4") diameter shall have cleanouts installed at intervals of not more than fifty feet (50') and building sewers of six inch (6") diameter and larger shall have cleanouts installed at intervals of not more than one hundred feet (100').

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 1(A)(4), 12-19-86)

13.32.060 Minimum horizontal separation.

Minimum horizontal separations shall be as indicated in Table 13.28-2.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 1(A)(5), 12-19-86)

Chapter 13.36
WASTEWATER TANKS

13.36.010 Design standards.

A. Before septic tanks, effluent pump tanks, sewage holding tanks, grease traps or any other sewage tanks may be manufactured, constructed, or sold for installation in King County, plans must be submitted by the applicant to and approved by the health officer, and further, prior to sale or installation, the tank must be included on the "approved list" as described in Section 13.08.046. The plan review fee shall be as specified in the fee schedule payable at the time of initial plan submission. In addition to the base fee, a review fee, payable at the time of completion of the plan review, shall be assessed equal to the actual costs associated with application review of any resubmissions, corrections or additions required. Such plans shall show all dimensions, reinforcing, structural details and other pertinent data as required. Approval may not be construed or used in any manner to imply endorsement of a product by the department. Upon approval by the health officer, the plans will be assigned an official number. Plans for built-in-place wastewater tanks shall be submitted to the health officer for review.

B. Tanks made of materials other than concrete shall be approved by the secretary prior to approval by the health officer.

C. No pre-cast wastewater tank shall be installed except those which are included on the approved list and have been clearly and legibly marked on the upper surface of the lid showing the number assigned by the health officer, name of the manufacturer, tank model number, tank capacity in gallons and date of manufacture.

D. No metal septic tanks shall be installed in areas under the jurisdiction of the department.

E. All septic tanks, whether they are installed or used singly, in series or in a divided system, must be designed according to waste load and in no case shall have a total capacity of less than one thousand (1,000) gallons, except by written permission of the health officer.

Minimum Capacities for Single-Family Residence Septic Tanks

Number of Bedrooms	Minimum Liquid Capacity Below Outlet Invert (Gallons)
4 or less	1000
Each additional bedroom, add	250
Garbage grinder installed, add [1]	750

1.Use of garbage grinders increases settleable and floatable solids accumulations in the septic tank, increases wastewater strength and thus increases the potential for system failure especially if frequent and regular tank monitoring and maintenance is not performed. Therefore, use of garbage grinders is not recommended (*See* Section 13.60.005(A)(3)).

_____

F. No septic tank with a compartment smaller than two hundred fifty (250) gallons liquid capacity may be installed.

G. A septic tank designed to service any facility except a single-family residence or multiple family housing shall have a liquid capacity at least equal to one and one-half (11/2) times the projected daily sewage volume, with a minimum of one thousand (1,000) gallons. Septic tanks serving multiple family housing shall have a minimum liquid capacity equal to two (2) times the projected daily sewage volume but not less than one thousand (1,000) gallons.

H. The liquid depth of any tank or compartment thereof shall not be less than forty-eight inches (48"), nor shall a liquid depth greater than seventy-two inches (72") be considered in determining septic tank capacity without written permission of the health officer.

I. All septic tanks or combinations of tanks installed shall provide at least two (2) compartments.

J. When multi-compartment tanks or two or more tanks in series are used, the first compartment or tank shall have a liquid capacity of two-thirds (2/3) to three quarters (3/4) of total required liquid capacity.

K. The minimum liquid capacity of a tank receiving intermittent use shall be determined from the maximum expected daily waste load, but shall in no case be less than one thousand (1,000) gallons.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 77 § 5, 12-11-91: R&R No. 3 Part 5 § 2(A), 12-19-86)

13.36.020 Construction.

No wastewater tank may be sold for installation, or installed which does not comply with this title.

A. Wastewater tanks shall be constructed of sound and durable materials not subject to corrosion or excessive deterioration and shall be watertight, constructed and installed to prevent the entrance of rainwater, surface drainage or groundwater. Baffles shall be of rigid material and secured to the compartment wall.

B. Newly installed septic tanks shall be equipped with a removable cartridge-type outlet baffle filter. An inspection/cleanout access port of sufficient diameter with a secured lid at or above finished grade shall be provided to allow convenient access for filter inspection and cleaning.

C. Septic tanks must be provided with a manhole or removable cover for each compartment (minimum dimension eighteen inches (18")) for septic tank inspection and sludge removal. All baffles shall have removable covers or properly placed manholes with a minimum diameter of six inches (6"), and the manhole cover or inlet and outlet covers shall have adequate permanent handles.

D. In each septic tank the inlet baffle or submerged pipe shall extend approximately six inches (6") below the liquid surface and above the liquid surface at least to the crown of the inlet

sewer.

E. In each septic tank the outlet baffle or submerged pipe shall extend below the liquid level a distance approximately equal to twenty-eight percent (28%) to forty percent (40%) of the liquid depth, and these baffles or pipes shall extend at least six inches (6") above the liquid level to provide for scum storage.

F. Septic tanks shall have at least one inch (1") between the under side of the top of the tank and top of inlet and outlet pipes or baffles to allow the required ventilation of the tank and disposal field through the main building vent stacks.

G. The invert of the inlet pipe in each septic tank must be at least three inches (3") above the outlet invert.

H. Each compartment dividing wall shall have a minimum four inches (4") diameter opening, the invert of which is a minimum of one inch (1") and a maximum of three inches (3") below the outlet invert. A baffle shall be located on the inlet side of the wall and shall extend a minimum of eighteen inches (18") below the outlet and shall extend a minimum of six inches (6") above the liquid level.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 2(B), 12-19-86)

13.36.030 Location and installation.

A. Minimum separation distances shall be as indicated in Table 13.28-2.

B. No septic tank or dosing tank shall be located under paving unless the manhole and inspection holes are extended up through the paving and the manhole is equipped with a locking-type cover and is approved as a traffic-bearing tank.

C. Each septic tank compartment shall be equipped with locking type manholes extending to grade to provide access for preventive maintenance inspections or sludge removal.

D. No septic tank or other receptacle for human excrement shall be constructed, maintained, or used which directly or indirectly discharges sewage upon the surface of the ground, or into any waters of the state.

E. Sewage tanks shall be located in area(s) accessible for periodic inspection and sludge removal.

F. Sewage tanks shall be located, installed and maintained to preclude surface and ground water from entering the tank. Sewage tanks shall be installed so that the outlet invert is higher than the maximum seasonal water table.

G. Unless otherwise provided by the health officer in writing, all sewage tanks shall be tested and demonstrated to be watertight in accordance with the method prescribed ASTM C1227-97 following installation and prior to being put into service.

H. Sewage tanks shall be installed and bedded according to the manufacturer's directions and upon a level, stable base that will not settle.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 2(C), 12-19-86)

Chapter 13.40
PUMP TANKS

13.40.001 Specifications - General.

A. No pump chamber shall be manufactured for use in King County, constructed, or

installed unless it is included on the approved list.

B. Pumps, fittings and controls shall be provided and installed in accordance with the *Guidelines for the use of pressure distribution systems*, Washington State Department of Health as amended and Figure 13.40-1 of this title.

C. Pumps and electrical wiring shall conform to all applicable state and local electrical codes and the permanent wiring shall be installed prior to notification of the health officer for as-built inspection.

D. Except by written permission of the health officer, pump tanks shall be at least one thousand (1,000) gallons liquid capacity.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.40.005 Location.

A. Minimum separation distances shall be as indicated in Table 13.28-2.

B. Pump tanks shall be located in an area(s) accessible for periodic inspection, maintenance and sludge removal.

C. Pump tanks shall be located, installed and maintained to preclude surface and ground water from entering the tank and shall be tested and demonstrated to be watertight in accordance with the methods prescribed in Chapter 13.36 of this title following installation and prior to being put into service.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.40.010 Siphon or pump requirements.

Where required, dosing systems shall be equipped with an automatic siphon or pump or duplicate alternating siphons or pumps.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 3(A), 12-19-86)

13.40.020 Manholes.

Pump chambers shall be equipped with locking-type manholes extending to grade to provide access to the dosing tank for inspection and maintenance.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 3(B), 12-19-86)

13.40.030 Size requirement.

The dosing tank shall be of sufficient size so as to provide the required dosing gallonage (*see* Section 13.48.050) plus one (1) day's estimated waste volume but shall not be less than one thousand (1,000) gallons.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 3(C), 12-19-86)

13.40.040 High water alarm.

Where pumping is required a visible or audible high water level alarm shall be provided on an electrical circuit separate from that of the pump. Effluent pump switching mechanisms shall not be located within the effluent tank, except for sealed floats.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 3(D), 12-19-86)

13.40.050 Sewage effluent pump specifications.

Designs utilizing sewage effluent pumps shall specify:

A. A minimum three-inch (3") separation between the bottom of the pump tank and the pump intake opening;

B. A disconnect union or an appropriate disconnect device;

C. A check valve on the outlet side of a union;

D. Filtering for pumps, if provided, must meet the following minimum criteria:

1. One-eighth inch (1/8") mesh size;
2. Noncorrosive material;
3. Cannot interfere with switches or floats; and
4. Easily removable for cleaning.

E. Pumps or dosing devices shall be specified by the manufacturer as suitable for the intended purpose.

[Figure 13.40-1, "Typical Pump Tank," may be found at this point in a printed edition of this code]

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 3(E), 12-19-86)

Chapter 13.44
DISTRIBUTION AND INSPECTION BOXES

13.44.010 Specifications--General.

A. No inspection box or distribution box shall be manufactured, sold or installed which is not constructed of durable, watertight materials and which is not equipped with an adequate removable cover.

B. The inspection box or distribution box shall be set on a concrete pad or tamped crushed rock to prevent misalignment.

C. The inspection box or distribution box shall be constructed and installed so the inlet invert is not less than four inches (4") above the level of the outlet invert(s), and the outlet inverts shall be not less than two inches (2") above the floor of the box.

D. The inspection box or distribution box shall be installed with at least thirty-six inches (36") of four-inch (4") tightline extending from each outlet. There shall be no filter material within thirty-six inches (36") of the inspection box.

E. There shall be no driving, parking, paving, or construction over the distribution or inspection box.

F. The distribution or inspection box shall have an inspection access with a secured lid at finished grade or be installed within twelve inches (12") of grade with a permanent visible marker at the finished grade.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 4, 12-19-86)

Chapter 13.48
DRAINFIELDS (SSAS)

13.48.010 Specifications.

A. No OSS shall be constructed unless there has first been a soil evaluation for the site completed in the manner described in Section 13.28.050 to determine type, size and location of the OSS. SSAS design and construction shall be in accordance with the following:

1. Maximum bottom width of trenches shall be twenty-four inches (24") except a thirty-six inch (36") trench width may be allowed provided that:

(a) For soil types 1A-3 the SSAS is pressure distribution in accordance with Section 13.48.060; and

(b) For soil types 4 and 5 the effluent shall meet treatment standard 2 prior to discharge to the SSAS; and

(c) The slope does not exceed thirty percent (30%).

Trench width in excess of thirty-six inches (36") may not be used for computation of absorption area.

2. Maximum depth of soil cover over the top of SSAS filter material shall not exceed twenty-four inches (24") except by written permission of the health officer. The bottom of the drainfield shall not be deeper than thirty-six inches (36") below the finished grade.

3. Minimum depth of soil cover over filter material shall not be less than twelve inches (12").

4. Minimum depth of filter material under drainfield lines shall not be less than six inches (6").

5. The amount of filter material over drainfield lines shall not be less than two inches (2").

6. Filter material shall be clean, washed, uniformly graded, non-deteriorating gravel, size three-eighths inches (3/8") to seven-eighths inches (7/8") or three-quarters inches (3/4") to one-and-one-half inches (11/2"), with no visible fine particles adhering to gravel surfaces and with the percent by weight passing the U.S. No. 200 sieve not greater than 0.5 percent.

7. Minimum separation between drainfield trench side walls shall not be less than four feet (4') of undisturbed soil for soil texture types 1, 2, and 3 and shall not be less than six feet (6') for soil texture type 4 and 5.

8. When gravelless trench systems are used they must be included on the "approved list," be installed in accordance with the manufacturer's installation instructions and be in accordance with Section 13.52.054.

9. Imported cover material must be stockpiled on site prior to the designer's pre-installation inspection unless otherwise waived in writing by the health officer.

B. Horizontal separations shall be maintained in accordance with Section 13.28.030(T), Table 13.28-2.

C. No drainfield pipes shall be installed unless all fittings are rigidly joined together in accordance with the pipe manufacturer's directions.

D. Approved rigid drainfield pipe (such as PVC) shall be used; provided further, that stakes are placed in the trench center at not more than five (5) foot intervals to maintain grade and a transit level, laser, or equally accurate instrument shall be used to assure that proper grade is maintained.

E. No drainfield shall be installed which requires a change in grade and earth cover unless terracing is accomplished by the use of a suitable plastic or concrete drop box or by use of rigid plastic pipe with glued joints (overflow stepdown). Such installation shall have an earth dam

twenty-four inches (24") thick preceding terracing. Earth dams shall consist of original undisturbed soil. If overflow stepdowns are used they shall be in accordance with Figures 13.48-1A and 13.48-1B.

F. Not less than one (1) drainfield trench monitoring port of at least four inches (4") in diameter, with a removable cover which extends to finished grade, shall be installed down to the infiltrative surface in each drainfield lateral.

G. No OSS shall be installed unless the pipe lines between the building and the septic tank, the septic tank and the distribution box, under paved areas, and within ten feet (10') of any buildings, shall be constructed of plastic, or cast-iron pipe laid with watertight joints. The pipe materials shall conform to material specifications of the *Uniform Plumbing Code*.

H. No drainfield shall be installed which, after installation of the gravel over the pipe, is not then covered with a geotextile barrier material which meets the specifications of Section 5, *Design Standards for Large On-site Sewage Systems*, December 1993, Washington State Department of Health, as amended.

I. No drainfield shall be installed under driveways, roadways, parking areas, paved areas or under areas subject to compaction by vehicular traffic.

J. Pipe used for construction of gravity drainfield lines shall be a minimum of four inches (4") inside diameter and constructed of rigid materials conforming with the *Design Manual: On-site Wastewater Treatment and Disposal Systems*, United States Environmental Protection Agency, EPA-625/1-80-012, October, 1980 as amended.

K. Pipe used for construction of tightline must comply with the current *Uniform Plumbing Code*.

L. SSAS shall be installed in undisturbed native soil. Trees greater than eighteen inches (18") in diameter, when measured two feet (2') above grade, shall be left standing, cut at ground level, burned in place, or managed by other methods acceptable to the health officer which will avoid disturbing the soil.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 5, 12-19-86)

13.48.020 Interconnected loop drainfields.

A. The slope of ground surface within the drainfield area may not exceed 0.5 percent in any direction.

B. The bottom of the trenches and the drain lines must be level to a tolerance of plus or minus one inch (1") in one hundred feet (100').

C. The invert of the drainfield line must be at least six inches (6") lower than the outlet invert of the septic tank.

D. The drainfield lines must be continuous and interconnected with at least two (2) connections to the inspection box.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 6, 12-19-86)

13.48.030 Serial distribution drainfields.

A. The slope of ground surface in the drainfield area must equal or exceed 0.5 percent in any direction.

B. The bottom of the trenches and the drain lines shall be level to a tolerance of plus or minus one inch (1") in one hundred feet (100').

C. The trenches shall follow the ground surface contours.

D. Adjacent trenches shall be connected with an overflow stepdown tightline in such a

manner that each trench is filled with effluent to the depth of the gravel at the top of the drainline before flowing to succeeding trenches. The drop box method of distribution, as described in the United States Environmental Protection Agency *Design Manual*, is an alternative to the overflow stepdown method of distribution.

E. The invert of the overflow line from the first trench must be at least four inches (4") lower than the outlet invert of the septic tank.

F. If more than three hundred feet (300') of drainfield is specified, the design shall divide the system into halves. The inverts of the outlets of the distribution box must be at least one inch (1") higher than the invert of any overflow pipe in the drainfield.

G. The drainfield shall be provided with an inspection or distribution box at the head of the system.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 7, 12-19-86)

13.48.040 Equal distribution drainfields.

A. No individual line of more than one hundred feet (100') shall be installed nor shall any lines be subdivided unless the effluent is applied by pressure distribution.

B. The drainfield shall be provided with a distribution box or directed dosing device which provides equal flow of effluent to all lines.

C. All lines shall be approximately the same length. The longest line shall not exceed the shortest by more than ten percent (10%).

D. Maximum grade of the bottom of gravity distribution drainfield trenches and drainfield pipe shall not exceed a tolerance of plus or minus one inch (1") in one hundred feet (100').

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 8, 12-19-86)

13.48.050 Dosing systems.

A. Any drainfield of more than six hundred feet (600') in total length of two foot (2') wide trench or any three foot (3') wide trench shall have pressure distribution.

B. No system of effluent gravity distribution using lift pumps or other dosing devices shall be permitted which does not limit the dosing at each pumping interval to a maximum volume of seventy-five percent (75%) and a minimum volume of sixty percent (60%) of the capacity of the disposal field pipe, nor shall such dosages exceed ten (10) minutes.

C. Pumps or other dosing devices shall be approved by the health officer. Pressure switches shall not be acceptable. Permanent electrical connection from the structure to the pump system shall be in accordance with applicable electrical codes prior to final OSS approval.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 5 § 9, 12-19-86)

13.48.060 Conventional pressure distribution systems.

A. Pressure distribution systems shall be designed in accordance with the specifications contained in the current edition of *Guidelines for the Use of Pressure Distribution Systems*, published by the Washington State Department of Health, as amended, except where modified by or in conflict with this title.

B. Monitoring and maintenance shall be in accordance with Section 13.60.010.

(R&R No. 99-01 § 2 (part), 3-19-99)

Chapter 13.52
ALTERNATIVE METHODS

13.52.010 Holding tanks.

A. Sewage holding tanks may be permitted only for controlled, nonresidential usage or as an interim method to handle emergency situations or to correct existing problem systems; provided, that an on-site system management program satisfactory to the health officer has been established to assure on-going operation and maintenance.

B. In addition, the applicant must provide the following information:

1. Amount of time that will elapse before sewers will be available to the property.

2. A no-protest agreement with the sewering authority or a signed petition supporting formation of a ULID if the property is within a sewer service area.

C. Design plans shall be submitted to the health officer for review. The design and operation shall be in accordance with this title and with *Guidelines for Holding Tank Sewage Systems*, December 1991, Washington State Department of Health, as amended. The application shall include specifications for the anticipated daily sewage load, the tank capacity, the alarm device, the overflow elevation, the location of the tank, and any other information pertinent to the installation.

D. A minimum bond of four thousand dollars ($4,000.00) must be filed with the health officer or management authority to guarantee cleanup in case of accidental spill and/or repair of the system.

E. A copy of a pumping contract with a certified OSS pumper must be filed with the department.

F. An OSS installation permit must be obtained prior to installation of the tank.

G. Monitoring and maintenance shall be in accordance with Section 13.60.010.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 6 § 1, 12-19-86)

13.52.020 Composting and incineration toilets.

A. There shall be an adequate system as defined by the health officer for treatment and disposal of gray water. Anticipated water use shall be specified.

B. The composting toilet must be designed, installed, operated and maintained in accordance with the *Guidelines for the Use of Composting Toilets*, dated July 1984, Washington State Department of Health, or as amended and with the "approved list." The incineration toilet must be designed, installed, operated and maintained in accordance with *Interim Guidelines for Incineration Toilets*, July 1984, Washington State Department of Health, as amended and with the "approved list."

C. Removal and disposal of composted materials shall be done in a manner which complies with *Guidelines for Sludge Disposal*, Washington State Department of Health, 1954, as amended, and *Sludge Management Guidelines*, Washington State Department of Ecology. The method for disposal shall be specified for each installation.

D. The department shall grant a reduction of up to fifty percent (50%) in septic tank size, and up to forty percent (40%) in drainfield size if the compost or incineration system is consistent with this title. In no case, however, shall the tank size be less than seven hundred fifty (750)

gallons. Further, there shall be recorded and filed a restrictive covenant running forever with the land, on the title of the affected property, and binding upon and benefiting all parties having any right, interest, or title in the property or any part thereof, and their heirs, successors and assigns. The covenant shall include the following:

1. A description of the waterless toilet installed and the alteration that would be necessary to convert to a water carried toilet system.
2. A covenant of agreement to maintain such system in proper working order.
3. A covenant of agreement that any alteration, change or modification to the OSS will not be undertaken without a new site application and approval by the health officer.

E. Monitoring and maintenance shall be in accordance with Section 13.60.010.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 6 § 2, 12-19-86)

13.52.030 Mound systems.

A. Mound systems shall be designed in accordance with this title and the specifications contained in *Guidelines for Mound Systems*, September 1993, Washington State Department of Health, as amended. However, in no case shall a mound system be installed in areas with less than eighteen inches (18") of original permeable soil except as provided in Section 13.28.030(S), Table 13.28-1.

B. Monitoring and maintenance shall be in accordance with Section 13.60.010.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 6 § 3, 12-19-86)

13.52.040 Aerobic Treatment Units (ATU).

A. ATUs shall be on the "approved list" and shall be designed, installed, operated and maintained in accordance with this title, with the specifications contained in *Guidelines for Aerobic Treatment Systems*, 1990, Washington State Department of Health, as amended, and with the manufacturer's instructions.

B. For uses requiring treatment standard 1 or 2, those ATUs needing disinfection to meet the appropriate required treatment standard shall have been tested and approved as meeting that treatment standard by the National Sanitation Foundation and DOH with a disinfection unit as specified by the manufacturer (chlorination not allowed except for marine shoreline failure repairs) installed as a component of the tested and approved unit.

C. Unless waived by the health officer, soil absorption area shall be computed in accordance with Section 13.28.070.

D. Monitoring and maintenance shall be in accordance with Section 13.60.010.

E. The owner shall provide a recorded covenant agreeing to operate, maintain and report the performance of the system in accordance with the manufacturer's recommendations and this title and to also maintain in effect at all times a maintenance contract with a service provider who is approved by the manufacturer and the health officer.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.52.050 Sand filters.

A. Sand filters shall be designed in accordance with this title and the specifications contained in *Guidelines for Sandfilters*, June 1996, Washington State Department of Health, as amended.

B. Monitoring and maintenance shall be in accordance with Section 13.60.010.

C. Proprietary sandfilters shall be on the "approved list" and for uses requiring treatment standard 1 or 2 any proprietary sandfilters needing disinfection to meet the appropriate required treatment standard shall have been tested and approved as meeting that treatment standard by the National Sanitation Foundation and DOH with a disinfection unit (chlorination not allowed except for marine shoreline failure repairs), as specified by the manufacturer, installed as a component of the tested and approved filter unit.

D. The owner shall provide a recorded covenant agreeing to operate, maintain and report the performance of the system in accordance with the manufacturer's recommendations and this title and to also maintain in effect at all times a maintenance contract with a service provider who is approved by the manufacturer and the health officer.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 6 § 5, 12-19-86)

13.52.054 Gravelless drainfield systems.

A. Gravelless systems shall be included on the "approved list" and shall be designed, installed and maintained in accordance with this title, with the approved list, with the specifications contained in *Guidelines for Gravelless Drainfield Systems*, May 1995, Washington State Department of Health, as amended, and with the manufacturer's directions.

B. Unless waived by the health officer, soil absorption area shall be computed in accordance with 13.28.070. Monitoring and maintenance shall be in accordance with Section 13.60.010.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.52.060 Experimental systems.

A. Experimental systems may be installed only when in compliance with the provisions of WAC 246-272-05001.

B. All costs for monitoring and reporting to the health officer shall be the responsibility of the owner. The health officer may charge for such additional costs involved in monitoring and reporting on each experimental system installed as is necessary to recover reasonable expenses.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 6 § 6, 12-19-86)

Chapter 13.56
INSTALLATION AND INSPECTION

13.56.010 General installation requirements.

All OSS shall be constructed and installed in a manner that will accommodate all sewage from the buildings and premises to be served, and in accordance with this title.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 7 § 1, 12-19-86)

13.56.020 Pre-installation inspection.

Once the building foundation has been constructed and the plumbing stub-out is installed, and before the installation of the OSS, the designer shall inspect the site and plumbing stub-out pipe and determine compatibility with the original design and applicable regulations including: satisfactory water quality and quantity if using an individual private water source, building

footprint, surface and subsurface drainage/seasonal water table conditions that may affect wastewater tank locations and on-site stormwater collection and infiltration systems. The designer must notify the department of his/her decision in regards to the pre-installation inspection within five (5) working days after the designer is requested to do the pre-installation inspection by the owner, the installer, or the health officer. The department may issue an installation permit only after the designer has notified the department in writing that the site is acceptable and meets the criteria of the original design and applicable regulations. If the OSS must be installed before construction of the building, the health officer may waive the plumbing stub-out portion of the pre-installation inspection requirement.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 7 § 2, 12-19-86)

13.56.030 On-site system inspection.

A. The health officer may inspect, at any reasonable time, the proposed location of any OSS, the work done, or the material used in an OSS. If the health officer finds that the work done, or material used, is not in accordance with this title the health officer shall revoke the installation permit if the specified changes are not made within a reasonable time, and it shall be unlawful to use the OSS.

B. Newly Installed On-Site Sewage System.

1. Once a new OSS has been installed, but before it is covered, the installer shall notify the designer and owner that the system is ready for inspection. The designer shall then inspect the work within five (5) working days. If the designer finds that the work is complete and in accordance with the approved design, the system performance specifications and this title, the installation permit shall be signed by the designer and then written notification shall be given to the health officer within one (1) working day and the owner and installer instructed to leave the system open and uncovered for three (3) working days after notification, so that the health officer may inspect it.

2. Should the designer disapprove the system, notification shall immediately be given to the health officer in writing. The designer shall also specify in writing to the owner and installer and health officer the changes to be made. Once the installer has corrected the system as specified by the designer, the designer shall be notified that the system is ready for inspection. The designer shall then inspect the system. If the designer finds that corrections have been made and that the system is in accordance with this title, the designer shall notify the department. Instructions shall be given to the owner and installer to leave the system open and uncovered for three (3) working days so that the health officer may inspect it.

3. The designer shall inspect the installation within five (5) working days after the backfilling operation has been completed.

4. If the work is in accordance with this title the designer shall submit to the department certification of system completion within thirty (30) days of being notified by the installer. This certification shall include a detailed "as-built" drawing of the system, pursuant to Section 13.56.050.

C. An OSS designed or installed by other than certified designers and installers shall not be covered until the health officer has given written approval to cover.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 7 § 3, 12-19-86)

13.56.040 Installation and backfilling.

Backfilling operations shall be done by a certified master or associate installer or by a

person under the direct eyesight supervision of the master installer under the OSS installation permit. Care must be taken to avoid any damage to the system. Unless otherwise authorized by the health officer, the OSS shall be backfilled within thirty (30) days after health officer and designer approval of the installation. The backfill material should be mounded above natural grade to allow for settling and to channel runoff away from the system. The installer shall notify the designer within one (1) working day of completion of backfill.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 7 § 4, 12-19-86)

13.56.050 As-built record.

A. Whenever a designer approves an installation, a completely scaled and dimensioned as-built plan and certification of the approved OSS shall be prepared in quadruplicate by the designer of the system on forms provided by the health officer. These forms shall then be signed by the designer and within thirty (30) days of notifying the health officer of system completion all four (4) copies shall be forwarded with one (1) copy of the OSS installation permit to the health officer.

B. The following details are required:

1. An accurate plot plan showing location of the essential components of the OSS including:

a. All sewage tanks, tank pump out lids, tank inspection access ports and depth of tank burial.

b. All plumbing stub outlets.

c. Building sewer line between building and septic tank.

d. Effluent transport line between septic tank and distribution box or inspection box.

e. The distribution/inspection box.

f. All soil absorption system laterals and permanent visible marker locations. The length and width of each individual drainfield lateral shall be shown to scale and the total number of lineal feet and square footage of laterals specified. A dimensioned reserve soil absorption system area shall be included.

g. The location of any unusual construction features such as step downs (in the drainfield laterals) must be clearly indicated.

h. Distance between any drainfield laterals and the edges of any fill soils, cuts, banks, terraces, foundations, property lines, lakes, streams, wells or other water sources, water lines, driveways and impermeable surfaces.

i. The location and detail of soil absorption system inspection ports.

j. Location and depth of permeable cover added after installation.

k. If a pump system, the pump size, manufacturer, model, pump cycle duration, dose in gallons/cycle and pump timer settings.

l. Location, size, shape, and placement of all buildings on the building site showing their relation to the OSS and to any easements, underground oil storage tanks, utility lines, and property lines.

m. Location, direction of flow, and discharge point of all ground and/or surface water interceptor drains and on-site stormwater infiltration systems.

n. Orientation of drawing with north direction by arrow.

o. Location of private water supply (well, spring, etc.).

p. Location of design control point.

2. Clearly Indicated Scale. Recommended scale of one inch (1") equals twenty feet (20'). Scales utilizing ratios smaller than one inch (1") equals thirty feet (30') are not acceptable.

3. An OSS owner's operating, maintenance and technical specifications manual which includes:

A. System performance specifications;

B. System operating instructions;

C. System preventive maintenance instructions and service schedule;

D. Make, model and/or performance specifications of all system components; and

E. Check list and schedule for routine monitoring inspections, effluent sampling and reports.

4. Copy of recorded "notice on title" required by Section 13.56.054.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 7 § 5, 12-19-86)

13.56.054 Notice on title.

A. New Systems. The owner shall record a notice on title with the King County Records and Election Division. This notice shall include all of the owner's responsibilities described in Section 13.60.005 of this title.

B. Existing Systems.

1. Prior to sale or transfer of property ownership, if the building is served by an OSS and the notice on title required by this section has not been recorded, then the owner shall record the notice as set forth in Section 13.56.054(A). At the time of sale the seller shall obtain the buyer's signature acknowledging receipt of a copy of this recorded notice.

2. At the time of sale or transfer of property ownership, the buyer or transferee of a property served by an OSS shall forward to the health officer a fee as set forth in the fee schedule and submit a signed copy of the notice on title as set forth in Section 13.56.054A.

3. At the time a building is remodeled or expanded, if it is not connected to public sewer and the notice on title required by this section has not been recorded, then the owner shall record the notice as set forth in Section 13.56.054(A).

(R&R No. 02-01 § 1, 5-17-02: R&R No. 99-01 § 2 (part), 3-19-99)

13.56.060 Approval.

A. Within ten (10) working days after receipt of certification by a designer that an OSS as installed is in accordance with this title, the health officer shall approve or disapprove thereof. It shall be unlawful to use a newly installed OSS prior to its approval by the health officer.

B. If the health officer disapproves such work or system, notification in writing shall be provided to the owner, designer and installer within ten (10) working days stating the reasons for such disapproval and stating the right to appeal.

C. Six (6) months following installation of a new OSS or concurrent with permitting a repair or modification to an existing OSS, the health officer shall send a notice together with a copy of the "as-built" drawing to the owner or occupant of the premises reminding of the requirement to implement regular and routine maintenance of the system.

Educational materials regarding use and maintenance of on-site systems for long term or permanent serviceability will accompany the notice.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 7 § 6, 12-19-86)

Chapter 13.60
OPERATION AND MAINTENANCE, MONITORING AND MANAGEMENT

13.60.005 Operation and maintenance.

A. The OSS owner is responsible for the continuous proper operation and maintenance of the OSS, and shall:

1. Determine the level of solids and scum in the septic tank at least once every three (3) years for residential systems with no garbage grinder and once every year if a garbage grinder is installed and, unless otherwise provided in writing by the health officer, once every year for commercial systems.
2. Employ an approved pumper to remove the septage from the tank when the level of solids and scum indicates that removal is necessary.
3. Cause preventive maintenance/system performance monitoring inspections to be conducted and any indicated service to be performed by an approved person at a minimum frequency in accordance with Table 13.60-1 unless otherwise established by the health officer or the sewage review committee.
4. Operate and maintain all OSS in accordance with this title, with pertinent alternative system guidelines issued by the DOH and with the approved OSS owner's operating and maintenance instruction manual.
5. Protect the OSS area including the reserve area from:
    a. Cover by structures or impervious material;
    b. Surface drainage;
    c. Soil compaction, for example, by vehicular traffic or livestock; and
    d. Damage by soil removal and grade alteration.
6. Maintain the flow of sewage to the OSS at or below the approved design both in quantity and waste strength.
7. Direct drains, such as footing or roof drains away from the area where the OSS is located.

B. The owner shall not allow:

1. Use or introduction of strong bases, strong acids or organic solvents into an OSS for the purpose of system cleaning;
2. Use of a sewage system additive unless it is specifically approved by the DOH; or
3. Use of an OSS to dispose of waste components atypical of residential wastewater, for example, but not limited to, petroleum products, paints, solvents, or pesticides.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.60.010 Monitoring of conventional, alternative, community or commercial systems.

A. The owner shall cause monitoring of the performance of any OSS at a frequency and by a qualified person as specified in Table 13.60-1. The health officer shall periodically provide notification to the OSS owner regarding proper use and maintenance of the OSS.

Table 13.60-1
Minimum Frequency of Preventive Maintenance/Performance Monitoring Inspections by System Type and who may Perform the Inspection

Inspection Interval	Gravity System	Conventional Commercial & Food System	Pressure Distribution sandfilter system or System sandfilter to mound system	Mound system or system designer	Aerobic Treatment Unit (ATU)	Non-Discharging Toilets [6] Service Establishments
45 days following approval [2]	n/a	n/a	n/a	OSM or system designer	n/a	n/a
Every 3 months	n/a	n/a	n/a	OSM [5]	n/a	n/a
First 6 months following approval 2	SO, designer or OSM	system designer [3]	OSM or system designer [3]	OSM or	n/a	SO OSM or system designer [3]
Annually	SO [4] or OSM		OSM [4]	OSM [3]	OSM [3]	SO [3] OSM [3]
Every 3 years	SO, pumper or OSM			OSM [3]	n/a	n/a n/a n/a

SO = On-site system owner
OSM = Certified on-site system maintainer (*See* Section 13.20.035)

Table 13.60-1
Explanatory Notes

1. The system components and conditions which must be inspected shall be specified in the approved OSS owner's operation and maintenance instruction manual.

2. An initial system performance inspection to insure that the system has been properly designed and installed, is adjusted properly, is being operated correctly and is performing as expected.

3. A complete OSS performance monitoring evaluation is to be conducted and a system performance monitoring report, on forms provided by the health officer, is to be submitted by the person performing the maintenance inspection to the OSS owner at the time of inspection and to the health officer within thirty (30) days of the inspection.

4. At least an annual septic tank maintenance check is required if the structure served is equipped with a garbage grinder waste disposal unit. If a screened outlet baffle is present an annual check is recommended. Pumpers shall report each pumping event to the health officer in

accordance with Chapter 13.68.

5. A quarterly maintenance and monitoring inspection of the ATU is required.

6.This monitoring is in addition to that required for the OSS receiving the building's non-toilet liquid waste.

B. The person conducting the maintenance and performance monitoring inspection shall submit a system operation and maintenance/performance monitoring report, on forms provided by the health officer, to the owner at the time of the inspection and to the health officer accompanied by a filing fee as specified in the fee schedule within thirty (30) days of the inspection.

C. The fee for each OSS monitoring/performance inspection conducted by the health officer shall be in accordance with the fee schedule.

D. Preventive maintenance and monitoring of the OSS performance and quality of effluent shall be required for any commercial development using OSS.

1. The minimum frequency and the type of inspection required shall be in accordance with Table 13.60-1 unless otherwise established by the health officer.

2. At least an annual inspection of OSS serving food service establishments shall be conducted.

E. For properties where required monitoring and/or preventive maintenance inspections are at least thirty (30) days overdue the health officer may notify the owner that the OSS is not in compliance with these rules. The health officer may, in addition to provisions of Chapter 1.08 of this code, cause a notice of non-compliance to be recorded with the real property records for the subject lot.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 49 § 3, 12-1-89: R&R No. 3 Part 8 § 1, 12-19-86)

13.60.020 Community and large on-site system management.

A. Maintenance and management of community systems and large on-site sewage systems shall only be provided by a public agency as defined in RCW 39.34.020 acting as the management authority. The management system shall comply with the *Guidelines for the Formation and Operation of On-Site Waste Management Systems*, dated November 1976, as published by the Washington State Department of Health until other rules are adopted by the health officer consistent with these guidelines at which time those rules shall govern.

B. The proposed waste management system agreements shall be submitted to the health officer for review and be accompanied by a fee as specified in the fee schedule.

C. The application shall be accompanied by an opinion letter from an attorney licensed to practice law in the state of Washington representing that the management agreement complies with all applicable laws and regulations, and is a valid and binding obligation of all parties thereto. The opinion letter shall be in such form as the health officer may require.

D. The management authority shall prepare a homeowner's manual which describes the responsibilities and duties of the homeowner along with precautionary information as may be necessary to preclude inadvertent abuse to the sewage system. A copy of such manual shall be provided to each homeowner by the management authority at the time of purchase or transfer of the property.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 8 § 2, 12-19-86)

Chapter 13.64

REPAIRS AND REMODELING

13.64.010 Repairs of failing OSS.

A. This title shall be applied to the maximum extent permitted by the site for any repair necessitated by the failure of an existing OSS. The health officer may waive compliance with these requirements if a conforming repair is not feasible and if in the health officer's judgment the repaired system will not have an adverse effect on public health, but the repaired system shall not discharge onto the surface of the ground, into surface waters, or otherwise fail. The health officer shall require a site design in accordance with Chapter 13.28 for the repair or replacement of a failing soil absorption component and if deemed necessary for a limited repair.

B. It is unlawful to repair an OSS without an OSS limited repair or repair permit.

Table 13.64-1
Minimum Treatment Standard Required for Repair or Replacement of Soil Absorption Components on Sites not Meeting Vertical and/or Horizontal Separation Requirements of this Title

Table 13.64-1
Explanatory Notes

The treatment standard required [1] for repair or replacement of soil absorption components of an existing failed OSS when conforming vertical separation and conforming horizontal separation to surface water and/or to individual private wells [6] is not possible shall be in accordance with Table 13.64-1 [4, 5].

1. The treatment standards refer to effluent quality achieved before discharge to unsaturated subsurface soil.

2. Alternative systems which meet the treatment standard without disinfection are required when the repair OSS is adjacent to fresh water bodies.

3. When adjacent to fresh surface water bodies the next higher treatment standard shall be provided unless treatment standard 1 is already provided.

4. The owner receiving a Table 13.64-1 repair permit where treatment standard 1 or 2 is required shall:

(a) Immediately report any OSS failure to the health officer;

(b) Continuously operate, maintain and monitor the OSS performance in accordance with the *Interim Guidelines for the Application of Treatment Standards 1 and 2 Using Alternative On-Site Sewage Treatment/Disposal Systems*, Washington State Department of Health, August 4, 1992, as amended; and

(c) Report the results of "(b)" to the health officer quarterly when

treatment standard 1 is required and annually when treatment standard 2 is required.

5. The owner receiving a permit shall file a "notice on title" in accordance with Section 13.56.054 and the notice shall include:

(a) A notarized agreement to comply with the conditions of footnote (4) above; and

(b) A disclosure that a nonconforming OSS has been installed to correct a failure because a conforming OSS is not feasible due to site and soil limitations and that due to the OSS nonconformity the system is not authorized to support new building construction or expansions or major alterations of the existing structure.

6. The health officer may authorize in writing a reduction of horizontal separation to an individual private drilled well to not less than 75 feet provided that the well is located upon the parcel and serves the building which is connected to the OSS and a higher treatment standard than otherwise would be required is provided unless treatment standard 1 is already provided. Drinking water quality shall be monitored for coliform and nitrate and reported to the health officer at least annually.

7. Mound systems are not permitted as a method to satisfy treatment standard 2.

C. Except as provided in Section 13.20.040, OSS repairs shall be supervised by an OSS master installer certified pursuant to Sections 13.20.020 and 13.20.030.

D. When the work of repairing an existing OSS has been completed, but before it is closed and covered, the person who designed the repair and owner shall be notified. The person who designed the repair shall then proceed as described in Section 13.56.030, subsections (B) and (C). The person designing the repair shall then call for the health officer to inspect the system. For a limited repair the installer shall submit a limited repair report to the health officer within five (5) working days.

E. Unless otherwise directed by the health officer, OSS repairs shall not be covered until the health officer has given approval.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 9 § 1, 12-19-86)

13.64.020 Remodeling--Approval required.

A. Existing buildings or structures to which additions, alterations, or improvements which would impact the operation of the OSS are made after the effective date of this title shall be served by an OSS complying with this title; provided, however, the health officer may waive compliance with these requirements for existing buildings or structures when the addition, alterations, repairs, or improvements to the building or structure are compatible with and do not adversely impact the OSS including the potential reserve area, do not affect the adequacy of the system to treat the sewage over the remaining useful life of the building or structure, and do not adversely affect the ability of the continued operation of the system to protect public health, surface water quality, or groundwater quality.

B. Applications for approval by the health officer of existing OSS serving existing buildings undergoing addition, alteration, repair, or improvement shall be made as provided in this section. The application shall be made on forms furnished by the health officer.

C. The health officer will review all applications to determine the compatibility of the proposed addition, alteration, repair, or improvement with the existing OSS.

1. Factors that the health officer may consider include, but are not limited to, the following:

A. Location of SAS in relation to foundation and existing improvements;

B. Size of SAS in relation to proposed use;

C. Condition of the existing OSS;

D. Useful anticipated life of the existing on-site sewage disposal system;

E. Potential for reconstruction and repair of the existing on-site sewage disposal system;

F. Ultimate purpose of the remodeling; and

G. Approved source of water.

2. The health officer may require the applicant to furnish such exhibits and information as may be deemed relevant and necessary to the application.

D. Within ten (10) working days of receipt of the application and all required information the health officer will notify the applicant of one of the following:

1. Approval of the application (and so notify the building official).

2. Corrections needed to be made to accommodate the application's approval.

3. Disapproval of the application (and notify in writing the building official and the applicant of the action taken and the reasons therefor).

E. The non-refundable fee for such a review shall be as specified in the fee schedule payable to the department. No charge shall be made for applications for projects that are determined to be categorically exempt by the health officer.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 98 § 7, 12-14-93: R&R No. 49 § 4, 12-1-89: R&R No. 3 Part 9 § 2, 12-19-86)

Chapter 13.68
LIQUID WASTE PUMPING AND HAULING

13.68.010 Pumper certification requirements.

A. It is unlawful for any person to carry on or engage in the business of pumping out the contents of septic tanks, cesspools, grease traps, seepage pits, vault privies, portable toilets and other receptacles of human sewage or to transport over the highways or to dispose of the contents therefrom in King County unless the pumper business operator and in addition, each employee of the OSS pumper who engages in OSS pumping activities, holds a valid certificate of competency and each vehicle has an annual inspection tab issued by the health officer in accordance with this title for conducting such business. The following liquid waste pumper's certificate of competency classifications are established:

1. OSS pumper;

2. Grease trap/interceptor pumper;

3. Vessel sewage holding tank pumper;

4. Portable toilet pumper.

B. All persons holding a valid sludgehauler registration on the effective date of these regulations will be classified by the health officer in accordance with paragraphs (A)(1) through (A)(4) of this section.

C. Not later than six (6) months after the effective date of these regulations each person

who was employed by an OSS pumper on the effective date of these regulations and who engages in OSS pumping activities shall obtain a pumper certificate of competency in accordance with this title.

D. An applicant may be issued a certificate under such terms, conditions orders and direction as the health officer may deem necessary for the protection of public health. The health officer may waive any specific condition required by this chapter for certification when, in the opinion of the health officer, the condition duplicates a requirement of another regulatory agency and which the applicant has fulfilled.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 11 § 1, 12-19-86)

13.68.020 Application.

All applications for pumper certification under this title shall be submitted to the health officer. The application shall state the applicant's name in full; if a partnership, then the names of the partners, the relation of the applicant to the firm or partnership; the name of the corporation if a corporation; the place of business and place of residence of the applicant; each of the partners in the business, if a partnership; and the place of business of the corporation, if a corporation. The applicant shall also provide the number and identification of all vehicles to be used; the type, location and name of all the sites that the applicant will use to dispose of the contents of septic tanks, cesspools, grease traps, grease interceptors, seepage pits, vault privies, portable toilets and other receptacles of human sewage; and the name and address of the person, firm, or corporation who is responsible for the operation of each disposal site. A valid disposal site letter of authorization must accompany the application. The application shall be signed by the authorized officer of the corporation, if a corporation, or by the managing partner, if a partnership, or by the individual owner, if owned by an individual, and by the individual applicant.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 11 § 2, 12-19-86)

13.68.030 Examination and inspection.

A. Except as described in Section 13.68.010(B) a pumper's certificate of competency and/or vehicle inspection tab shall be issued to the applicant only after:

1. Completion of a course of instruction given by a qualified person(s) acceptable to the health officer and which covers, as applicable to the certificate of competency classification, basic sanitation principles affecting public health, on-site sewage concepts, details of proper servicing of sewage tanks or other receptacles of human sewage and the transporting and disposing of sewage, septage, sludge, or fats, oils and grease;

2. Satisfactory completion of an examination relevant to the pumper certificate of competency classification, which may include the applicant's knowledge of sanitation principles affecting public health, knowledge of principles of on-site sewage system operations, knowledge of sewage tank and/or portable toilet servicing procedures, knowledge of regulations governing disposal of septage, sewage and/or fats, oils and grease, and the reliability of the applicant in observing sanitation laws, regulations and directions, plus other pertinent information as deemed necessary by the health officer except that the grease trap/interceptor pumpers, vessel sewage holding tank pumpers and portable toilet pumpers may be exempted from such examination upon satisfactory completion of an industry certification/training program acceptable to the health officer. The fee for such examination or evaluation of training documentation shall be as specified in the fee schedule payable in advance and nonrefundable;

3. Annual inspection and approval of the applicant's equipment to be used in the

performance of the business;

4. The business operator provides the health officer with evidence of compliance with state of Washington minimum bonding requirements as stated in Chapter 18.27 RCW and contractor's liability insurance for at least fifty thousand dollars ($50,000); and

5. Business operators, other than OSS pumpers, sign and provide to the health officer a statement certifying that all employees working in contact with equipment potentially contaminated by sewage have successfully completed a course of instruction given by a qualified person(s) acceptable to the health officer which covers basic sanitation principles affecting public health.

B. Certificate of competency and vehicle inspection fees shall be as specified in the fee schedule. Said fees are to be paid to the department to be used to defray expenses in issuing registration certificates, conducting inspections and otherwise administering this title.

C. The health officer shall act upon each new and renewal application within thirty (30) days of receipt of a complete application and documentation that all requirements of this title have been met.

D. After certification has been approved by the health officer, the applicant will be issued a certification of competency registration number. The business owner shall permanently affix said number preceded by the letters "KC No." on each of the applicant's collection vehicles. Said numbers must be in a contrasting color to that of the vehicle and in letters at least three inches high and placed along with the annual wastewater vehicle tab in a conspicuous place designated by the health officer. In addition, the name of the operating firm shall be conspicuously displayed on both sides of the truck.

E. Certificates shall expire December thirty-first of each year.

1. The health officer may renew certificates of competency provided that the applicant submits not later than December thirty-first a complete renewal application accompanied by: a fee as set forth in the fee table, evidence of at least one (1) CEU for each pumper, authorization for continued use of all disposal sites, a completed annual vehicle inspection report and proof of minimum bonding and insurance requirements; and

2. Complete applications for renewal submitted after January fifteenth shall be subject to a late fee in the amount of one-half (1/2) the renewal fee, after January thirty-first double the renewal fee and after February tenth a renewal shall not be granted without passing a competency examination.

(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 89 § 1, 12-16-92: R&R No. 3 Part 11 § 3, 12-19-86)

13.68.034 Pumping equipment.

A. Tanks shall be fully enclosed, watertight, of metal construction in good repair, and with openings or hatches built to seal securely.

B. The vehicle shall be equipped with either a vacuum pump or other type of self priming pump, which will not allow spillage from the diaphragm or other packing glands.

C. Each vehicle shall be equipped with a section of hose, pipe or funnel made of easily

cleaned, durable material to properly direct the flow of the tank contents while emptying the tank at the approved disposal site.

D. The sewage suction hose on vehicles shall be in sound condition, drained after each use and stored on the vehicle in a manner that will not create a public health hazard or nuisance.

E. Each vehicle shall at all time carry a water hose of adequate length for washing spillage and equipment, and with disinfectant (bleach), hand sanitizer, and cleaning implements (5 gallons of absorbent, 5 gallon bucket, broom and shovel).

F. All pumping equipment shall be properly maintained and kept clean.

G. Each pump apparatus not operating on a vacuum with automatic shut-off shall be equipped with a positive check valve or holding tank contents level indicator to preclude over-filling.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.68.036 Pumping procedures.

The pumper shall:

A. Pump out the full contents of the sewage tank.

B. Leave the premises serviced in a clean and sanitary condition.

C. Dispose of septage and sewage only at approved disposal sites.

D. Possess at all times during pumping and transporting, complete records of the origin of the septage and sewage.

E. Measure and record the depth of sludge and scum layers in septic tanks.

F. Observe and record the physical condition of the sewage tank pumped including signs of tank exfiltration or infiltration and condition of baffles in septic tanks.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.68.040 Report requirements.

A. Persons performing pumping activities governed by this title shall submit sewage tank pumping reports monthly to the health officer on forms provided by the department. These reports shall include information on each sewage tank pumped in King County to include:

1. Date and address of property where tank is pumped.
2. Any observed discharge of sewage or effluent to the surface of the ground or to surface waters.
3. Any spill of sewage or septage by the pumper, its location and approximate number of gallons, and description of clean up activities.

B. OSS Sewage Tank Service Report. The certified pumper shall provide a written service report to the OSS owner at the time of service and to the health officer upon request. This report shall, at a minimum, include the following:

1. Name, address, and phone number of the pumping firm;
2. Name, address and phone number of the owner/occupant of property serviced;
3. Date service performed;
4. Depth in inches of floating scum mat and sludge layer;
5. Type of tanks and number of compartments pumped;
6. Number of gallons pumped;
7. General tank condition observed;
8. Condition of baffles, noting whether filter baffles were cleaned;
9. Description of any other service performed; and

10. Signature and certificate of competency number of person performing the work.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 11 § 4, 12-19-86)

13.68.050 Revocation of certificate of competency and inspection certificates.

Any certificate of competency and inspection certificate issued under this title may be suspended or revoked for cause by the health officer pursuant to Chapter 1.08 of this code.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 11 § 5, 12-19-86)

13.68.060 Approval of change of disposal sites.

Should a pumper plan to dispose of the contents of the septic tanks, cesspools, grease traps, or seepage pits, vault privies, chemical toilets and other receptacles of human sewage at a disposal site(s) other than the site listed in the current application for certification, the holder of the certificate shall first obtain written approval of said site from the health officer.
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 11 § 6, 12-19-86)

13.68.070 Maintenance of disposal sites.

Any person, firm, or corporation responsible for the operation of a disposal site on which the contents of septic tanks, cesspools, grease traps or seepage pits, vault privies, portable toilets and other receptacles of human sewage are disposed shall maintain said disposal site in a safe and sanitary condition .
(R&R No. 99-01 § 2 (part), 3-19-99: R&R No. 3 Part 11 § 7, 12-19-86)

Chapter 13.74
FEES

13.74.010 Fee schedule.

Persons shall pay permit fees, application review fees, reinspection fees, monitoring report filing fees, variance request fees, special service fees and miscellaneous fees under this title as set forth in the fee schedule below:

1. **OSS construction permit fee**
   - a. single-family, new pressurized $460.00
   - b. single-family, new gravity..... 330.00
   - c. single-family, repair or modification 200.00
   - d. single-family, limited repair 25.00
   - e. non-single-family 610.00
2. **Designer certificate of competency fee**
   - a. Issued July 1st or before..... $150.00
   - b. Issued after July 1st 75.00
   - c. Designer competency examination 100.00
3. **On-site system maintainer certificate of competency fee**
   - a. Issued July 1st or before..... $250.00

b. Issued after July 1st 125.00
c. Maintainer competency examination..... 250.00

4. Master installer certificate of competency fee

a. Issued July 1st or before.....$150.00
b. Issued after July 1st 75.00
c. Master installer competency examination 75.00

5. Associate installer certificate of competency fee

a. Initial and renewal certificate $40.00
b. Associate installer competency examination 75.00

6. Pumper certificate of competency fee

a. Business owner $100.00
b. OSS pumper employee..... 50.00
c. Vehicle inspection tab $25.00/vehicle
d. Pumper competency examination ..... $ 25.00

7. Site design application review fee

a. Conventional gravity system, new $350.00
b. Pressurized system, new..... 520.00
c. Revision review ..... actual cost/$50.00 minimum

8. Community and large on-site systems review fees

a. Preliminary engineering report, new and replacement $300.00
b. Plans and specifications, new 500.00
c. Plans and specifications, repaired and replacement 250.00
d. Management agreement review 100.00

9. Subdivision review fees

a. Pre-application review .....$345.00 + $115.00/lot
b. Final application review .....$345.00 + $175.00/lot

10. Sewage review committee fees

a. Appeal review $450.00
b. Refunds, non refundable amount 75.00

11. Miscellaneous fees

a. Building remodel review $210.00
b. Wastewater tank manufacturers standards review.....$150.00 base fee plus actual costs over $150.00
c. OSS maintainer's report filing (database management) $10.00
d. Alternative, community, commercial system monitoring by the health officer 75.00
e. Experimental system review ..... actual cost
f. Disciplinary/performance review conference for certificate of competency holder $150.00
g. Reinstatement of certificate after suspension.....applicable certificate fee
h. Reinspection fee..... actual cost/$50.00 minimum
i. Change of designer of record ..... $ 35.00
j. Replacement private well/spring location review..... 115.00
k. Watertable monitoring plan review..... 420.00
l. OSS operation and maintenance program fee

due from buyer or transferee of a property served by OSS at time of sale or transfer of property ownership 40.00

(R&R No. 02-02 § 1, 11-15-2002: R&R No. 02-01 § 2, 5-17-02: R&R No. 99-08 §1, 11-19-99: R&R No. 99-03 §1, 10-15-99: R&R No. 99-01 § 2 (part), 3-19-99)

13.74.020 Inspection fees outside departmental hours (hourly rate).

The health officer is authorized to charge fees for inspection service requested to be performed outside regular departmental working hours at a rate equal to the cost of performing the service.

(R&R No. 99-01 § 2 (part), 3-19-99)

13.74.040 Special service fees.

The health officer may determine and charge such fees deemed necessary for furnishing special services or materials requested by the public that are not originally provided under permit or pursuant to statute. Such services and materials to be furnished may include but are not limited to the following:

A. Reproduction and/or search of records and documents.

B. Special site and/or OSS examination.

C. Examination, testing, or inspection of particular products, materials, construction, equipment or appliances to determine their compliance with the provision of the title or their acceptability for use. The health officer and his/her authorized representative shall have full authority to specify the terms and conditions upon which such service and materials shall be made available, consistent with any applicable statutes and ordinances; provided, that any fees imposed pursuant to this authorization shall be reasonably equivalent to county cost for furnishing said services and materials.

(R&R No. 99-01 § 2 (part), 3-19-99)